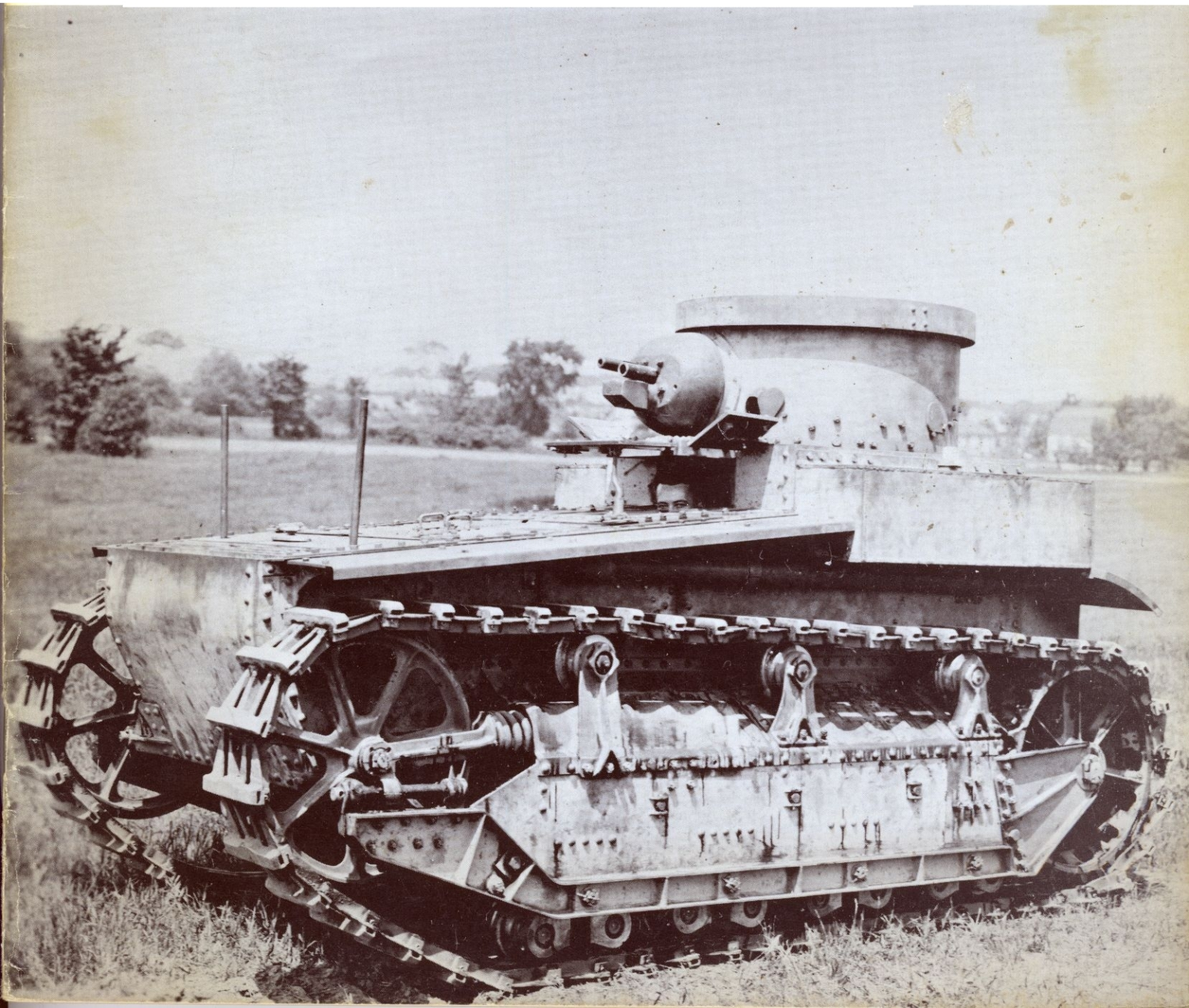
G2 AFV

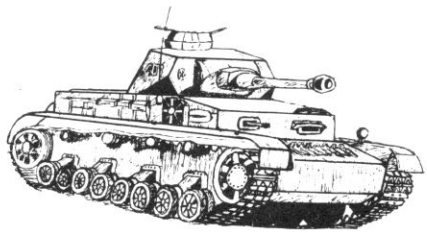
75¢

A MAGAZINE FOR ARMOR ENTHUSIASTS

Volume 4 Number 5



International Scale Model Show



SOUTH HALL, LAS VEGAS
CONVENTION CENTER

AUGUST 4 & 5, 1973
MODEL REGISTRATION: 10 AM TO
6 PM SATURDAY AUGUST 4
CONTESTANTS: $2.50
2 DAY PASS 5 MODELS PER PERSON
ADULTS: $1.00 DAILY
CHILDREN: $.50

Brookhurst Hobby's

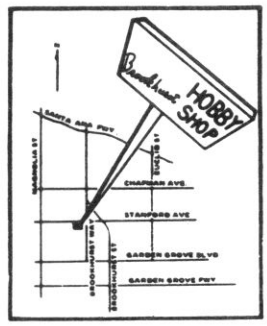
12741 BROOKHURST WAY
GARDEN GROVE, CALIF. 92640 (714) 539-4121

We specialize in ARMOR, MINIATURES, and "hard to find" models for the discriminating modeler. Also in stock, are the latest books, periodicals, and supplies for the WARGAMER. Watch for our "shop sessions" on Wargaming and special armor films.

ALL THE NEEDS FOR THE ARMOR BUFF WITH OVER 20 BRAND-NAMES IN MINIATURES (ALL PERIODS)

COMPLETE CATALOG $1.25

- MAIL ORDER
- WARGAMES (AVALON HILL)
- AIRFIX
- ARMTEC
- BANDAI
- FUJIMI
- MIDORI
- MONOGRAM
- NICHIMO
- NITTO
- OTAKI
- RARE-TANKS
- RENWAL
- REVELL
- TAMIYA



STORE HOURS

MON. THURS.	12:00 P.M. – 8:00 P.M.
FRIDAY	12:00 P.M. – 8:30 P.M.
SATURDAY	10:30 A.M. – 7:00 P.M.
SUNDAY	12:00 P.M. – 5:00 P.M.

Models for the Armor Fan - by Mail

SPECIAL OFFER

We are disposing of a large collection of the Nazi-period German "SIGNAL" magazine.

There are 41 issues of this rare pictorial in the collection, with some additional duplicate issues, coverage is: 1940-1, 1941-12, 1942-16, 1943-11, 1944-1 MAKE OFFERS- either individually or for complete batch..

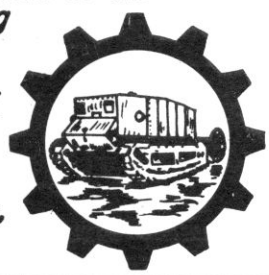
Jerry's Hobbies
733 South Main Santa Ana, CA 92701

Tankette

The Bi-Monthly Official Journal of the Miniature Armoured Fighting Vehicle Association -

Subscriptions - $4.25/Year Surface Mail

Write to -
G.E.G. Williams, Secretary
15 Berwick Ave., Heaton Mersey, Stockport, Cheshire SK4 3AA England



As in the past several issues, AFV-G2 is continuing to present the first complete illustrated history of the Armored Fighting Vehicles of the Italian Army. Authored by Dr. Nicola Pignato, a widely-known historian on the Armed Forces of Italy, this serialized book is available only to readers of AFV-G2. The portion of the book in this issue will be found at the center of the magazine, between pages 18 and 19, bound in with the regular pages. To remove the center supplemental sheet in this issue, use a razor blade or sharp knife to carefully slit between the staple holes in the sheet, which will then be free of the magazine. Readers may then punch the supplemental sheets with a three-ring binder punch and install them in a separate binder. When placed together with the other supplemental sheets from AFV-G2, the complete series will present a detailed history of all Italian armored vehicles, with numerous previously-unpublished photographs and 1:50th scale drawings. The sheets are separately numbered for ease of binding, and at the end of the publication, a complete index and table-of-contents will also be furnished to readers in order to complete the book.

AFV G2

Volume 4, Number 5

June 1973

Contents

The NVA Easter Offensive of 1972, by Col. R. J. Icks, Ret'd. 4
Wargamer's Data Sheet: M36B1 90mm Gun Motor Carriage 9
Tactical Markings of the Waffen-SS, Part 3, by James Steuard 10
Men Against Tanks, by Kurt Fischer 12
Some Notes on Superdetailing Tamiya's Panzer III, by Ron McGlothlen 14
BA-64 Soviet Armored Car, 1:32nd Scale Drawings, by James Steuard 15
The Baron's Bookshelf.....with Book Reviews..... 16
Comparison of Armored Infantry Support Vehicles of World War II. 17
German 15cm s.I.G. 33 auf Selbsfahrlafette 38(t), Ausführung M "Bison" 1:32nd Scale 5-View Drawings, by S. R. Cobb 18
Color 'n Camouflage: The German Volkswagen Type 82 "Kübelwagen" 20
Armor in Pictures: Reader Submitted Armor Photos 22
The German Motorcycle Reconnaissance Company by James Steuard 24
Organization Chart: Panzer-Aufklärungs-Kompanie (Krad), by J. Steuard 25
AFV Inquiry: Questions and Answers for the Armor Reader 27
Lost and Found, the Saga of a Soviet SU-76i, by Charles N. Adams and James W. Loop 28
Soviet Self-Propelled Guns, Constructed on the T-34 chassis 30
Historian's Notebook, by William Platz 31
Letters to the Editor 33
New Products..... 33

AFV's of Italy, the continuing series by Dr. Nicola Pignato... Between 18 and 19

Staff:

Editor ——— James G. Steuard
Assistant Editor ——— William E. Platz
Art Director ——— Steven R. Cobb
Art Staff ——— Dwight McLemore
——— Robert W. Garbisch
Circulation ——— S. L. Steuard
——— D. L. Otto
——— John G. Yonos
Advertising ——— Duane L. Thomas

Cover:

Setting in a scene reminiscent of Italy, this odd-looking light tank was not European in design or execution. In the late 1920's, a group of far-seeing U.S. Army Cavalry officers (including names such as Chaffee, Patton and Campbell), armed with a small appropriation, approached the Cunningham Company of Rochester, New York to produce a fast light tank. The result was the vehicle shown on the cover: the experimental Cunningham light tank, armed with a pair of small, turret-mounted guns.
Photo: Cunningham Company, courtesy of W. G. Yengst.

© Baron Publishing Company, 1973

AFV-G2 is a magazine, published monthly for Armor enthusiasts, with the purpose of gathering and disseminating information about Armored Fighting Vehicles and their employment; to provide an opportunity for persons seriously interested in the history of Armored Fighting Vehicles, in the modeling of these AFV's and associated equipment, and in the playing of military Wargames utilizing miniature AFV's, to share ideas and items of mutual interest and to promote an interest and awareness in the subject of Armored Fighting Vehicles.

AFV-G2 is available with an individual issue price of $.75 from local Hobby Shops, Magazine and Book Dealers, or from the Publisher. Subscriptions in the United States (including APO and FPO addresses) are $7.50 yearly. All foreign subscriptions are $8.50 yearly, payable in U.S. funds. Checks should be made payable to "AFV-G2" or to Baron Publishing Company and forwarded to Baron Publishing Company, P. O. Box 293, La Puente, California 91747. In the United Kingdom, contact: Greening, Knoll Cottage, Knoll Road, Dorking, Surrey.

AFV-G2 is printed in the United States. Application to mail at Second Class Postage rates is pending at La Puente, California 91747. Change of Address forms and undelivered copies should be forwarded to P. O. Box 293, La Puente, CA 91747.

Information for Authors: All work on AFV-G2 is voluntary. The Editor invites all contributions to be considered for publication. We welcome articles, data, photographs and drawings. Manuscripts should be typewritten, double-spaced if possible. All submitted material becomes the property of AFV-G2 unless other arrangements are made at time of submission. Extreme care will be taken with material to be returned upon publication, however, the publisher cannot accept any responsibility for loss or damage. Authors who are subject to Department of Defense Security Regulations are personally responsible for clearance of any original material before submission to this publication. Address all submitted material to AFV-G2, P. O. Box 293, La Puente California 91747.

THE NVA Easter Offensive of 1972



by Robert J. Icks, Colonel AUS-Ret'd.

Although the record of events in Viet Nam from March through June 1972 is not yet sufficiently complete to come to thoroughly realistic conclusions, enough has been published to permit the chronology of events to be outlined, to summarize comments from American advisors and observers who were there and to reach a few tentative conclusions.

Some commentators have stated that they felt the North Vietnamese Army (NVA) offensive across the Demilitarized Zone (DMZ) on March 29, 1972 made no sense. But the more Republic of Viet Nam territory that could be taken over, the better position North Viet Nam would be in for any subsequent peace settlement. Throughout this long and bloody war, the Northvietnamese have been willing to accept tremendous losses, apparently with the thought that new generations continually were growing up and could be drafted to replace those losses. The ridiculous standard of body count as a measure of battle success which was used by the ARVN and the US forces thus had little meaning. And losses in materiel were gladly replaced by China and the Soviet Union and the Soviet satellite states because they believed the United States not only was being bled but because it would tire of supporting South Viet Nam.

Nevertheless, the leaders in Hanoi needed an obvious success for reasons of morale as well as to test and if possible discredit the Vietnamization program under which the United States was disengaging, leaving only ground advisers and a strong air force. It is not easy to know exactly what the Northvietnamese expected and whether the results were less or more than they expected. Some commentators are of the opinion that the legendary NVA General Vo Nguyen Giap gave up guerilla tactics in favor of a strategic turning movement coupled with a strategic envelopment, hoping the results would be worthwhile no matter how far the offensive progressed.

Such a movement would involve a main force striking into the central highlands from Cambodia to take Pleiku, Kontum and Qui Nhon. This would split the RVN along Highway 19 which runs east and west and would serve as a defense line against ARVN counterattacks. ARVN forces in the north would be impelled to move south to protect their line of communications and then be exposed to being hit from the rear by NVA forces striking across the DMZ. At the same time, secondary attacks toward Saigon from Cambodia, hit and run strikes in the Delta and renewed pressure in Laos and Cambodia would keep ARVN forces occupied in those areas and unable to move to protect Highway 19.

The logistics of such a program must have been

staggering, especially since so much supply had to be hand or bicycle carried a few miles at a time and mainly at night. Supply-dump caches had to be scattered and filled a little at a time over a period of many months due to constant harassment of the HoChiMinh Trail by the U.S. Air Force.

But the actual chronology of events did not follow this sequence. The reason may be that supplies in some cases were destroyed. It may be that it was decided to strike first in the north to draw ARVN forces in the north to the central highlands. Or it may have been due to a foul-up in NVA timing. At any rate, on March 29, after a bombardment of ARVN positions along the DMZ, the NVA launched a two-pronged offensive toward Dong Ha and Khe Sanh, pushing the ARVN before them. The weather was foul, preventing ARVN air support until Sunday, April 2. By then, NVA armor had been stopped by the M48A3's of the ARVN 20th Armor, a brand-new unit interposed on the initiative of its commander.

An NVA tank column had moved down Highway 1 without opposition on April 2 toward Dong Ha. From a hull-down position on a ridge south of Dong Ha, the ARVN 20th Armor hit several NVA T54's at ranges up to 3300 yards. The rest retired. Monitoring of NVA tank radios indicated that NVA armor commanders were bewildered at coming under fire at such a long range.

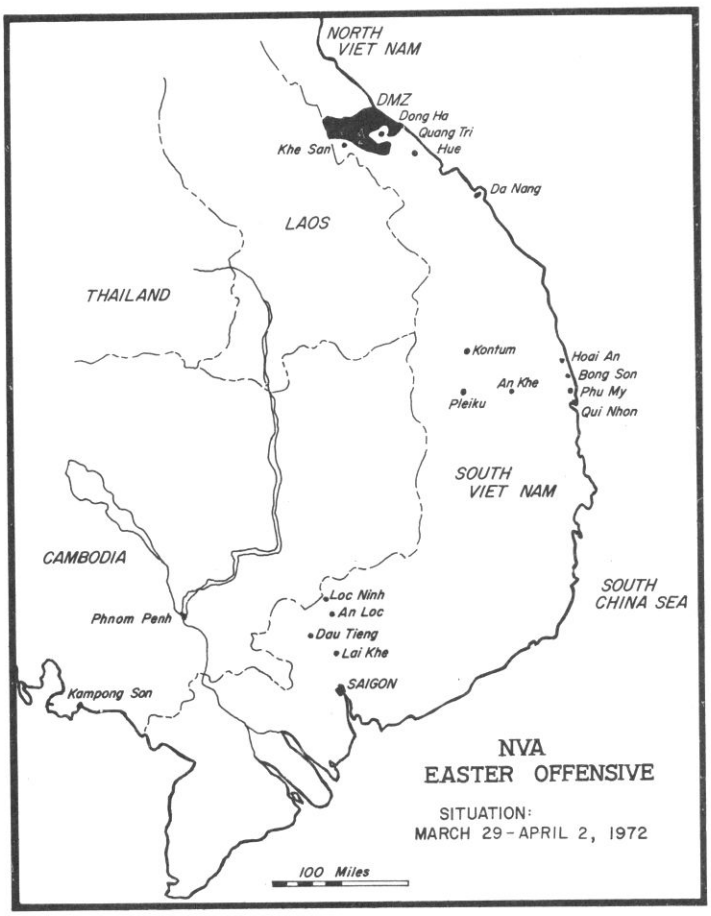
Except for a 10 to 25 mile coastal plain of sandy beaches and dunes backed by rice paddies and marshes which extend to the steep mountains, much of the area in the north is difficult tank country. Rivers and mountains generally run northwest to southeast, cutting the densely vegetated lower ground into channels, making off-road armor operation difficult. The second prong of the offensive swinging past Khe Sanh for this reason, generally moved southeasterly to cut Highway 1 below Quang Tri.

By April 3rd, the ARVN had rushed their 3rd Infantry Division with a Marine battalion and the ARVN 11th and 17th Armored Cavalry equipped with M113's and M41A3's to back the 20th Armor, but the NVA force of four divisions plus armor was able to break through Dong Ha, but was held there for a month before the ARVN yielded to superior odds.

The second NVA attack began on April 6th from Cambodia toward Loc Ninh. Here there were hard dirt trails, rubber plantations and generally open territory. A third NVA attack began north and south of Kontum on April 7th. Here an extensive plateau exists along the Laotian and Cambodian borders with heavy jungle, but a little farther south there are open forests and grasslands. In the dry season, the roads are extremely dusty.

Loc Ninh in the south fell by April 8th. An Loc came under siege and an ARVN paratroop unit was sent to relieve the pressure but met stiff opposition. In the north, Quang Tri was surrounded and three NVA columns were reaching-in toward the coast between Hue and Da Nang. Activity then reopened in Cambodia to keep the Cambodians and ARVN there occupied.

Armor attacks on An Loc took place from April 12th to 14th from several directions. NVA tanks usually moved in column on roads in groups of up to 12 tanks. The attacks involved the 5th, 7th and 9th NVA Infantry Divisions with artillery and over 100 Soviet T54's, ZSU 57-2 anti-aircraft vehicles and BTR-50PK armored personnel carriers and Chinese T60 amphibious tanks. (The Chinese T60 tank usually is called the PT 76 but, although it is almost identical to the PT 76, it has a dome-shaped turret and is armed with an 85mm gun.) In the attacks on April 12-14, 36 NVA vehicles, mostly T54's, were destroyed within the town and many more outside.



The attacks were repulsed but the NVA continued to pound at An Loc, firing several thousand rounds of artillery shells into the town each day. The ARVN relief column from Saigon was held up and it became necessary to airlift ARVN replacements into the town. By April 17th, NVA pressure on An Loc began to diminish but in the north, Hue was threatened when Fire Base Bastogne, 12 miles away, fell to the NVA. U.S. bombing north of the DMZ was suspended and was not begun again until April 2.

Before April 19th, the NVA had advanced eastward in two columns in the central highlands, bypassing Kontum and Pleiku. After a day of quiet on April 19th, the NVA reopened their attack, capturing Haoi An and reaching Phu My north and south respectively of Bong Son near the coast. There were evidences of ARVN panic and and of officers who were more than reluctant to accompany their troops in combat, and at least one ARVN divisional commander "bugged out". American advisers noted that ARVN troops in this area were reluctant to patrol the hills and ridges from which the NVA fired artillery and rockets into Pleiku and Kontum, but this is not to be wondered at with such leadership.

ARVN troops also relied on their air power to do their work for them, a bad habit picked-up from the Americans. No American unit had moved in Viet Nam without extensive air bombardment on any opposition whether or not an air strike was actually needed. During the monsoon season when air support was not available, most U.S. units practically ceased operations. So, aside from poor leadership, ARVN units can hardly be blamed for lack of aggressiveness in this area. Not only is it necessary to train recruits to be soldiers, officers up to and including generals have to learn their craft as well. The American system of "ticket punching" or six months staff work and six months combat leadership assignments was a fine system on paper, but in practice it resulted in



subjecting good troops to inept commanders. And the ARVN did not even have this background for officers in many cases.....

This policy and its results was not the fault of American troops and its many capable combat leaders, but of the direction from above, some of it resulting from political considerations. The London Daily Telegraph Magazine of September 1, 1972 quoted U.S. General Ellis Williams appearing earlier before a Congressional committee as saying that the sophistication and proliferation of weapons and gear for Viet Nam were intended "to avoid having the American young man stand toe to toe, eyeball to eyeball or even rifle to rifle with the enemy". Naturally this philosophy as well as that of calendar-based leadership rubbed-off on the ARVN as well.

Activity northwest of Saigon reopened on April 21st when three NVA columns had almost reached Lai Khe. The NVA again began pounding at An Loc, now defended by the augmented 5th ARVN Infantry Division. A fourth NVA column from Cambodia moved north toward Dau Tieng. On April 23rd, the NVA began a siege of Kontum and on April 27th, they reopened their attacks on Quang Tri which was now surrounded. By May 2nd, they were finally pushed out of Quang Tri by the ARVN who had suffered tremendous losses in breaking the siege.

The NVA opened another tank attack on An Loc on May 11th, continuing until May 13th. These attacks began with heavy artillery preparation but were made by armor alone, without infantry support. They were stopped. More NVA armor was destroyed, mainly by ARVN three-man tank-killer teams, sometimes after the tanks had run out of fuel. On the night of May 23rd, the NVA tanks based on Dau Tieng attacked An Loc from the south without infantry or artillery. Some 45 minutes after they were detected, three were hit by 500 pound bombs from friendly air support. The rest were destroyed by tank-killer teams or by ARVN artillery firing over open sights.

In addition to these three major tank attacks at An Loc, there were occassional night movements of NVA armor in that area to defense positions, most of which continued to be held until the middle of June. But in the An Loc area alone, some 85 out of the original estimated 100 NVA armored vehicles were destroyed in the town or along its various approaches. The NVA used skill in their infantry attacks but not in their use of armor which was hesitant and badly coordinated, although on all fronts their initial appearance came as a shock to ARVN troops. Later, the ARVN learned to separate NVA infantry from their armor but sometimes the NVA used one axis for their armor approach and another for infantry carried in APC's but their timing was so bad and their movement so hesitant that they were easily dealt with separately.

The NVA violated a basic rule of warfare in their overall offensive by not being strongest at the decisive point. They were spread too thin in attempting to mount three major attacks plus hit and run tactics in the Delta, as well as trying to keep-up pressure in Laos and Cambodia. None of these efforts was mutually supporting and no single attack had the power needed for a breakthrough. Their armor generally was squandered without imagination, and it was poorly coordinated with the other arms. Little tank-versus-tank fighting took place and no ARVN armor was hit by NVA armor on any front.

American field commanders earlier were quoted by Bernard F. Halloran in "ARMY" of April 1972 as saying about NVA use of armor: "They handled their tanks poorly"..."The infantry and tank attacks were coordinated badly"..."They ran their tracks all too close together"..."They violate all the rules of tank warfare"...."They were moving along a road when they should have been spread-out"..."They were moving slow and indecisively when they should have been charging hell

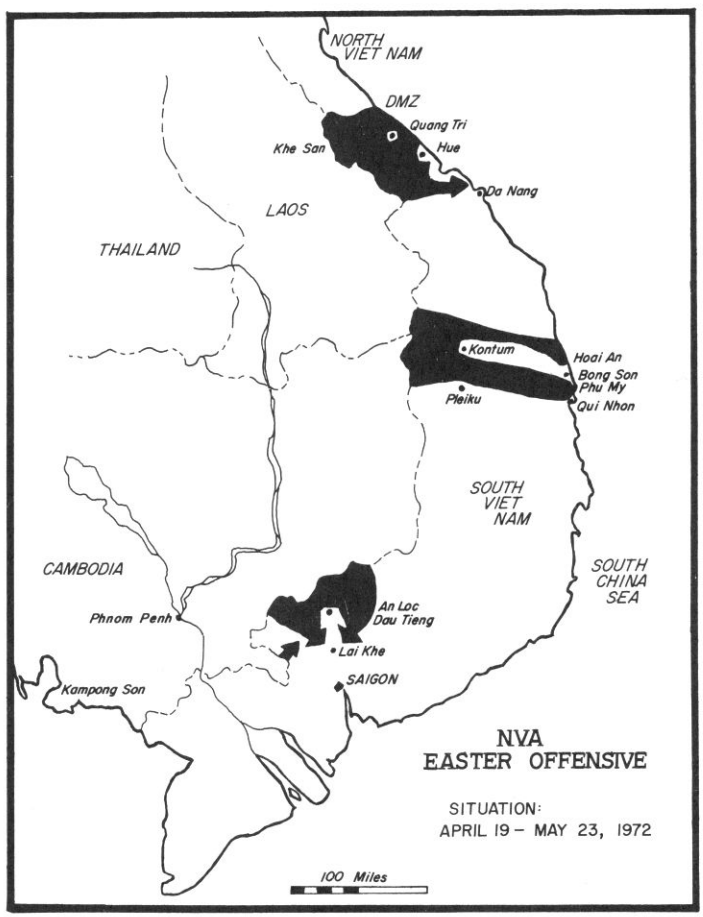




Photo Above: A destroyed Soviet T54 at An Loc. Whether this is one of the three T54's hit by aircraft bombs is uncertain, however it is certain that none of the crew survived. An Loc was the scene of numerous ARVN tank-killer team actions against prowling T54's and in virtually every case, ARVN soldiers learned that T54's were vulnerable.
Photo: J. A. Loop

Photo on Page 4: Two captured Chinese Type 60 Amphibious Tanks sitting immediately outside of An Loc. It is evident from the bullet splashes on the turrets that these vehicles had been hit by machine gun fire, but not damaged. The white painted markings on the vehicle sides identify the ARVN unit that captured them. Photo: J. A. Loop

bent for leather....."

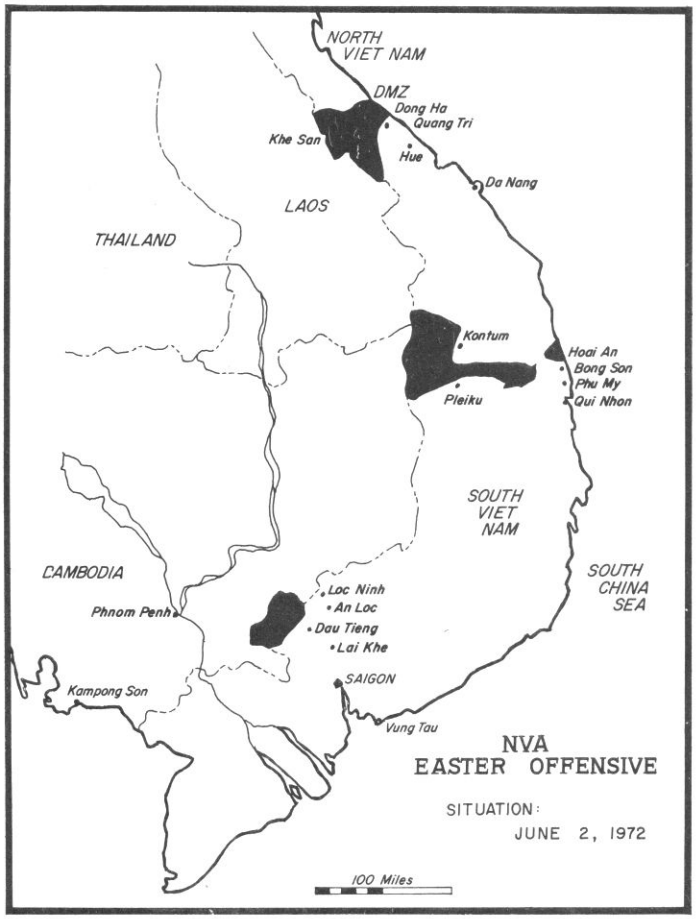
But, judging from television shots of ARVN operations involving the use of armor it appeared that ARVN armor also often was roadbound and stationary or used as artillery, so that ARVN armor use could be similarily criticized.

Opinions of American observers and advisers differed regarding the quality of Soviet versus U. S. vehicles, but generally it was felt that the Soviet T54 looks better than it is, and that the M48A3 was superior to it. One observer felt that even the M41A3 was a match for the T54. It was discovered by the ARVN, just as the Israeli's had before them, that the T54 fuel tanks which are located to the right of the driver under the front glacis are extremely vulnerable, especially to shaped charges, in spite of 100mm thick armor. Other Soviet and Chinese vehicles are vulnerable to such rounds almost anywhere they were hit.

Additionally, the T54 lacks a turret basket, and the dome-shape of the turret requires that the main 100mm gun must be at maximum elevation to insert a round of ammunition, slowing down the rate of fire to some two rounds a minute, when coupled with fewer rounds carried and those being in horizonal rather than vertical racks. This tank lacks a rangefinder, although this is not necessarily a problem with well-trained gunners. Finally, the T54 is powered by a diesel engine made of a magnesium-alloy that is quickly ignited once a fire starts in the engine compartment.

If nothing else could be said about the NVA Easter Offensive, it at least could illustrate the difference between strategy and tactics. Much has been made of the fact that the offensive on each front was stopped, not without difficulty, but it was stopped and, in some areas, was turned back. The result from a tactical standpoint therefore was an NVA defeat. On the other hand, almost a year later, the NVA still occupied much of the territory it had overran, in spite of massive U. S. air support in the form of aerial bombing of troop positions, supply routes and supply bases. Therefore, from the strategic standpoint, the offensive was an NVA success because it placed North Viet Nam in a better bargaining position than before the offensive.

An old story comes to mind which illustrates this. A group of American tourists was being taken through the Tower of London by a British guide. At one point, the guide smirked as he indicated a small cannon, saying: "That cannon was captured at Bunker Hill." One of the Americans cut-in with: "That's nothing to brag about. We've got the hill, haven't we?" And that is what



the NVA could say. But there are other things to consider.

The United States had fought for some five years with about twelve divisions plus auxiliary troops and the world's largest air force against a ragtag army with little or no armor or artillery and yet was able to accomplish little more than a draw. In this offensive, the ARVN were hit by a new NVA with maximum power which included heavy artillery, missiles and perhaps 1000 tanks and which took tremendous casualties. Initially, they appeared to perform badly. But ARVN policy earlier had been to relieve commanders of units which suffered many casualties, so that they often were overly cautious and tended to forego night operations. After the initial shock and as officers rose to their responsibilities or were shaken-out, the ARVN performed magnificantly for the most part, and proved the equal of the NVA.

Gimmickry like sensors, "smart" bombs, "People sniffers", night vision devices and all the specialized and sophisticated equipment devised by the United States did not seem to be able to prevent the movement of supplies, tanks and trucks down the Ho Chi Minh Trail. In one way or another, the NVA appeared able to circumvent almost every new gimmick. As one example, the multi-million dollar "people sniffers" were made useless by means of hanging bags of human feces from trees. Some NVA supplies unquestionably were destroyed by American bombers and both US and ARVN tactical air broke-up numerous NVA troop concentrations but although the air arm claimed many tank kills, as often as not the kills claimed had already been stopped by ground fire of one sort or another.

Thus, the strategic gains made by the NVA appear to have been offset by an ARVN strategic gain, demonstrating that it was able to stand on its own feet, justifying the confidence placed in President Nixon's Vietnamization program. Continued stopping of efforts by the NVA to reopen the several fronts from June 1972 until the cease fire in January 1973 proved that the ARVN had become a tough and confident army.

There also may be some technological lessons for the United States from the war in general and the NVA Easter Offensive in particular. Any future war in which we may be engaged is not likely to bear any resembalnce to that in Viet Nam. American tactical air faced some tactical ground fire but no enemy tactical air force. American ground forces and supply areas were not subject to enemy air attack. Enemy armor was badly used and was certainly no indication of the power which well-trained armored troops are capable of exerting. Terrain problems are likely to differ greatly in a future war. In short, it is to be hoped that our Army and Air Force will not be guilty of proving the old claim that armies too often spend their time between wars training for the last war instead of the next one.

* *

SOURCES

Armor in Vietnam, Armored Cavalry Advisory Detachment, 22 January 1966.

Chicago Tribune (News Stories)

Likes Marvin, "Triple CIB", Letter to the Editor in ARMY TIMES, August 16, 1972

NVA Use of Armor, Bernard Halloran in ARMY, Apr. 72

Notes on Enemy Armor at An Loc, Colonel Walter F. Ulmer Jr., in ARMOR, Jan-Feb. 1973

RVN Armored Forces and Soviet Tanks, Colonel R.R. Battreal, Letter to the Editor in ARMY, January 1973

Soviet Armor Comes to Viet Nam, Bernard F. Halloran in ARMY, April 1972

TV News Programs, ABC, CBS and NBC

T54 Vulnerabilities, Major Louis F. de Mouche, Letter to the Editor in AVIATION WEEK & SPACE TECHNOLOGY.

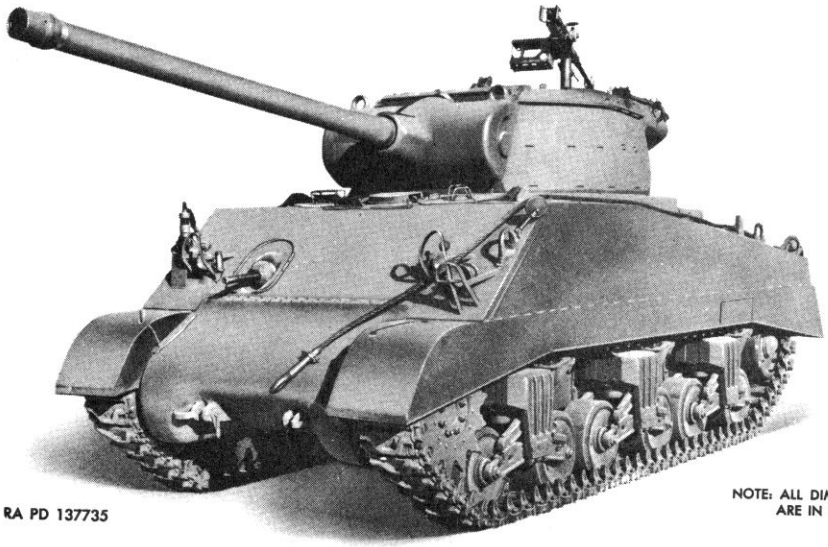
Why Hanoi's Offensives Failed, Colonel William C. Moore in U.S. NEWS & WORLD REPORT, August 7, 1972

Wonder Weapons of War, London Daily Telegraph Magazine, September 1, 1972.

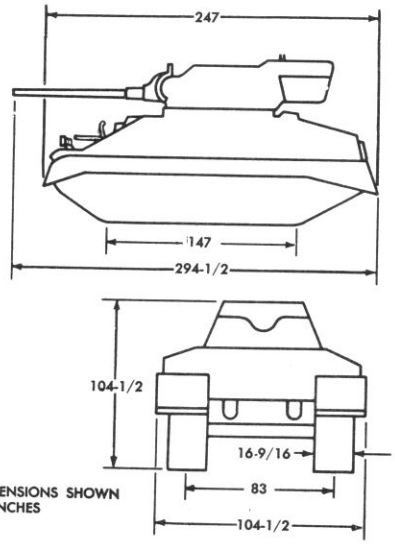
A NOTE FROM THE EDITOR.....

This is not so much a note of apology but is instead more of a note of explanation. To the many persons who have written questions and comments to the editor, and who expect prompt answers, we have hit an impasse! The shear volume of incoming mail has reached a point where it has become impossible for our very small staff to answer everything.....while we greatly appreciate your comments and criticisms, we must ask that you use some moderation in your requests. If you're writing a letter that is to appear in our "Letters to the Editor" column, please indicate this in the letter and on the envelope; the volume of mail precludes our answering these letters and our answer and/or comments will appear in the magazine. If you're asking AFV Inquiries, please be patient! Research takes time! If your question is of general interest, we'll print it in the column; and, for gosh sake, if you expect an answer, keep your questions pertinent (and brief) and enclose a stamped envelope for the answer. To the one reader who has sent those thirty questions, an answer will take thirty pages and more time than I have; I'm sorry but work on the 'G2' is first.

CARRIAGE, MOTOR, 90-MM GUN, M36B1



RA PD 137735



NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

Technical Manuals: 9-748, 9-1731B, 9-1731D, 9-1731G, 9-1731K, 9-1750D, 9-1750K, 9-1825A, 9-1825B, 9-1826B, 9-1828A, 9-1829A; **Supply Catalog:** SNL G-233.

Classification: Substitute Standard.

Armament: 1 gun, 90-mm, M3, turret mounted; 1 gun, machine cal. .50, Browning, M2, heavy barrel (flexible), pedestal mounted on top of turret bustle; 1 gun, machine, cal. .30, Browning, M1919A4, ball mounted at right front of hull.

Ammunition: 47 rounds, 90-mm; 1,000 rounds, cal. .50; 2,000 rounds, cal. .30, machine gun; 450 rounds, cal. .30, carbine; 12 hand grenades; 4 pots, smoke.

Purpose: To provide mobility for 90-mm gun and crew protection in offensive combat.

Fire Control and Vision Devices: Periscope, M13 or M13B1 or M6 (vision); quadrant, elevation, M9: quadrant, gunner's, M1; telescope, M83C or M76F or M71C; telescope panoramic, M12 (sight); azunytgm ubducatir M20.

Communications: (SCR-619 or SCR-610) and (RC-99); or (SCR-619 or SCR-610) and (RC-99) and (AN/VRC-3).

GENERAL DATA

Crew	5
Weight, fighting	(lb) 68,000
Shipping dimensions, uncrated	(cu ft) 1,180; (sq ft) 208
Vehicle dimensions:	
Over-all length w/gun in traveling position	(in.) 286
Ground clearance	(in.) 17⅛
Pintle height, loaded	(in.) 27⅛
Ground pressure	(psi) 14.1
Electrical system	(volts) 24
No. of batteries	(12-volt) 2
Type of ground	negative
Fuel octane rating	80
Capacities:	
Fuel	(gal) 168
Cooling system	(qt) 56
Crankcase, refill	(qt) 32
Transmission, differential, and final drives:	
Three-piece, round-nose	(qt) 152
One-piece, sharp-nose	(qt) 164
Brakes	mechanical, controlled-differential
Parking brake, type	pedal for locking steering brakes
Transmission forward speeds	5
Gear ratio	High 0.73:1; Fourth 1:1; Low 7.56:1
Differential-drive gear ratio	3.53:1
Final-drive gear ratio	2.84:1
Hull construction	welded homogeneous armor plate

Armor, Turret: Welded homogeneous armor plate.

PERFORMANCE

Maximum grade ability	(percent) 60
Turning radius	(ft) 31
Fording depth	(in.) 36
Maximum width of ditch vehicle can cross	(in.) 90
Maximum vertical obstacle vehicle can climb	(in.) 24
Fuel consumption (average conditions)	(mpg) 0.7
Cruising range (average conditions)	(mi) 115
Allowable speed, governed	(mph) 26
Maximum allowable towed load, gross	(lb) 10,000

ENGINE

Manufacturer: Ford	Model GAA
Type	4-cycle, valve-in-head; No. of cylinders (60-deg V) 8
Displacement	(cu in.) 1,100
Bore	(in.) 5.4
Stroke	(in.) 6
Compression ratio	7.5:1
Governed speed	(rpm) 2,800
Brake horsepower (max w/std accessories)	450 at (rpm) 2,600
Torque (max w/std accessories)	950 lb-ft at (rpm) 2,100
Type of ignition	magneto

ADDITIONAL DATA

Data given for vehicle equipped w/track, steel, T54E1, Tracks, rubber, T48 and T51; track, steel, T49; track, rubber-backed-steel, T74, are interchangeable.

One-piece or three-piece differential housing used on this vehicle.

Manual and power turret-traversing mechanism.

Auxiliary generator: Homelite model HRUH-28.

TACTICAL MARKINGS of the WAFFEN-SS

Part 3

by James Steuard

Part 3 of this series continues the coverage of the tactical markings of SS-Panzer-Division "Das Reich". In part 2, the familiar marking known as the "Kampfrune" was described, and this marking is shown below, as it appeared on a divisional signal truck in 1942. While early-war photos that show this marking are common, late-war photographs are non-existant.



At the top of the next column is a photograph of a Tiger I. heavy tank which has been identified as a vehicle from "Das Reich" photographed during preparation for the Kursk offensive (in the summer of 1943). This photo is one of several, apparently taken of the same tank; the infantrymen in the foreground are obviously Waffen-SS (from their camouflage), and the only difficulty comes in verifying that this tactical marking was used by SS-Division "Das Reich". In Volume 2 of the Bender-Taylor series of books on the Waffen-SS, the authors indicate that they are of the opinion that the

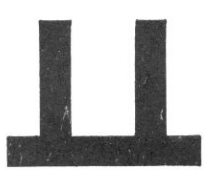


tactical marking displayed on the hull of the Tiger was a temporary marking used only during the Kursk period. Some sources have indicated that temporary markings were used during preparation for the Kursk attack as a form of concealment, however, veterans have indicated that this practice was not used by the three Waffen-SS divisions that took part in Kursk. What, then, is the unit that used the marking that is diagramed below?

Until very recently, the only photographs to show this tactical marking are of the single Tiger I. that supposedly is at Kursk. Some researchers have indicated an opinion that this marking might be that of the Generalkommando-SS-Panzer-Korps that controlled the SS units during 1943; in this case, the Tiger I. was assigned to the corps-level heavy tank battalion. It has been verified that this battalion was in existance during the summer of 1943, however, the tank's turret number "S11" would normally indicate that the vehicle was assigned to one of the "schwere" (or heavy) tank companies that were a part of the divisional Panzer-Regimenter, and it further appears that the corps heavy tank battalion was still in training during the attack on Kursk.....

A number of months ago, the author purchased

Possible 2nd Style of Tactical Marking - 2.SS-Panzer-Grenadier-Division "Das Reich"; taken from a photo of a Pz.VI."Tiger", circa Summer 1943. Marking in white.



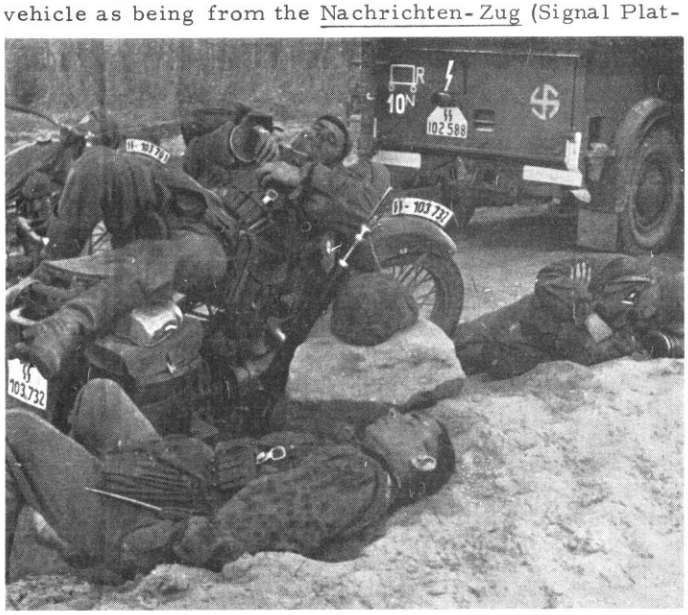
the Japanese "Koku-Fan" publication covering the Panzer IV. (and other German vehicles). While browsing through the photo content of this booklet, I discovered another picture of the "mystery" marking, and readers are referred to page 69 of the publication. The photo shows the identical marking on the left front fender of a Sd. Kfz. 10 light halftrack, shown passing an abandoned Canadian Churchill tank.... one of the German halftrack's crew is wearing Waffen-SS camouflage clothing, further tying the tactical marking to that organization. Since SS-Division "Das Reich" was in action in Normandy during 1944, it is quite possible that this tactical marking continued in use with "Das Reich" following the Kursk offensive, and in fact, was the "official" late-war tactical marking of this division. However, more evidence must be found to verify this hypothesis.....

In the winter of 1940, a new Waffen-SS division was created in Germany from foreign volunteers from the Scandanavian countries. Initially designated "Germania", the division's name was soon changed to "Wiking" supposedly to appeal to the volunteers. Soon after its



Tactical Symbol - SS-Division (mot.) "Wiking", Autumn of 1941, from a photo of a Sd.Kfz.222 of 2./SS-Aufklärungs-Abt. 5. taken during the attack into Russia

formation, the divisional headquarters issued a comprehensive order outlining tactical markings to be used on the division's vehicles. In addition to an indication that tactical symbols were only to be used when the division operated in conjunction with Army units, the orders established the divisional tactical symbol which was designated as the "Sonnenrad". This marking is illustrated above, as it appeared on a reconnaissance vehicle during the attack into Russia in 1941; the marking was painted in white. It could be best described as a swastika with curved outer arms. On all of the examples checked, the "Sonnenrad" appeared with vertical-horizonal crossing parts, and not "mobile" as described in Bender-Taylor's books. The photograph below shows typical markings as they appeared on the rear of a medium car, probably photographed in 1942. The "Sonnenrad" appears on the right, and the markings on the left identify the vehicle as being from the Nachrichten-Zug (Signal Platoon) of the Regimental Headquarters Company of SS-Infanterie-Regiment (mot.) "Nordland" (the number "10" is apparently the individual vehicle number).





The photograph above illustrates the "Sonnenrad" painted on the front of a Sd. Kfz. 232 8-wheeled armored car from SS-Aufklärungs-Abteilung 5. (the divisional reconnaissance battalion) during the attack into Russia in 1941. Note that the dark blue-gray of the car has been subdued with a coat of locally-applied mud, which partially obscures the tactical marking, which is just to the left of the front shield.

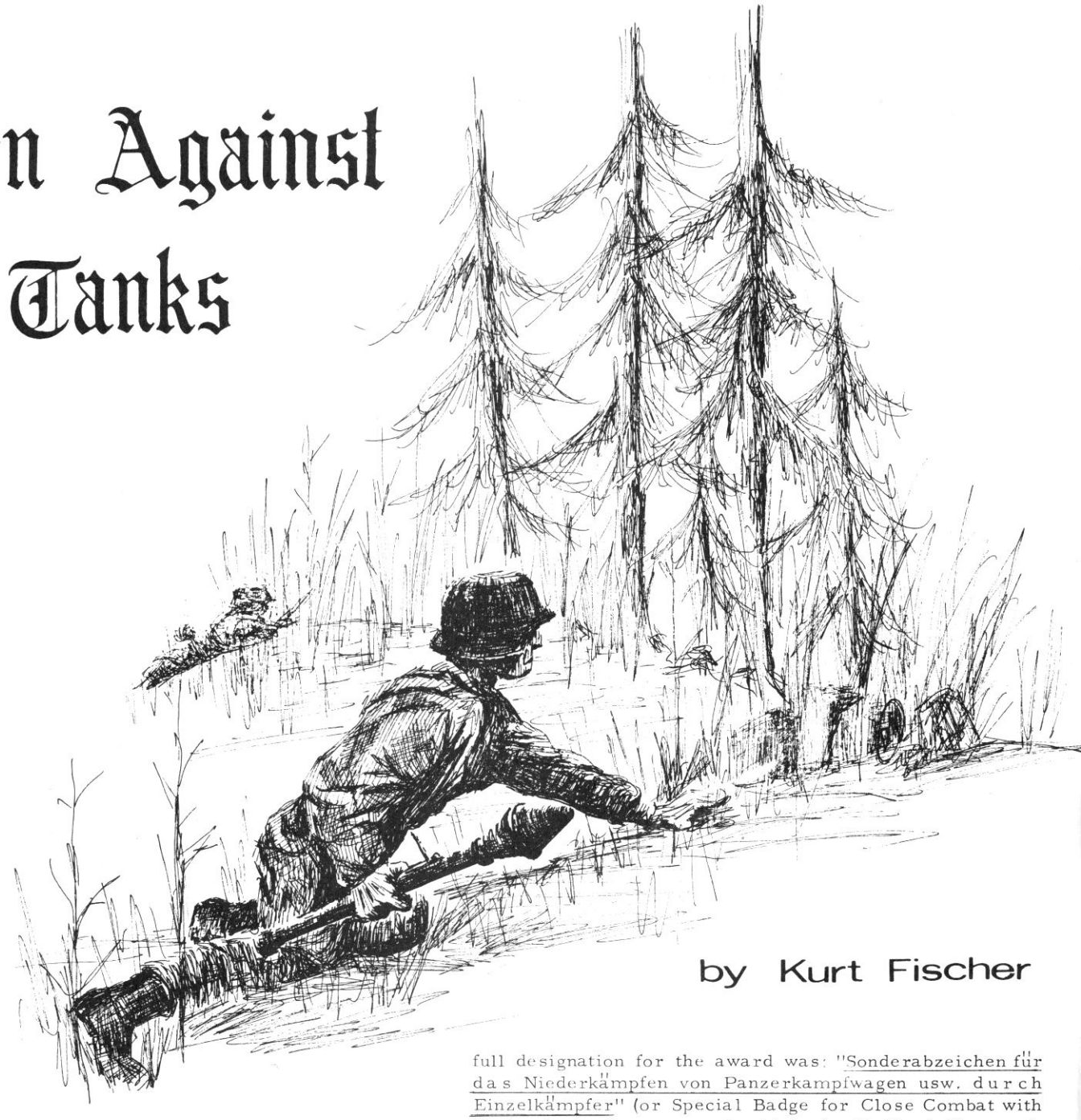
During 1943, SS-Panzer-Grenadier-Division "Wiking" gave-up its "Nordland" regiment as a cadre for the creation of a new division, the 11. SS-Freiwilligen-Panzer-Grenadier-Division "Nordland", which will be covered later in this series. Other personnel were detached to form the headquarters of the III. (germanisches) SS-Panzer-Korps, and a 1943 letter from the former division commander, SS-Obergruppenführer Felix Steiner, now the new corps commander, requested that the "Sonnenrad" also be used as the tactical marking for the new division and corps headquarters. Whether or not this idea

- Continued on Page 32 -



Tactical Marking - SS-Panzer-Grenadier-Division "Wiking", Summer 1943, from a photo of a Panzer III., Ausf. L; photo taken in Russia.

Men Against Tanks



by Kurt Fischer

Initial field experiences with enemy armor on the Eastern Front in 1941, especially with the T-34 and KV types, convinced German officials at the Oberkommando des Heeres (OWH, the Army High Command) that their existing anti-tank weapons (including tank armaments) were inadequate. Where earlier complacency existed, now production of larger caliber, higher-velocity weapons were given a high priority, and development of new weapons (based on experience) was started immediately. The OKH (through the Ersatzheere, or Replacement Army) also initiated training of the individual soldier against tanks (as earlier recounted in AFV-G2, Vol. 3, No. 4), realizing that a successful defense by infantrymen against Soviet armor would go a long way to shorten early deficiencies.

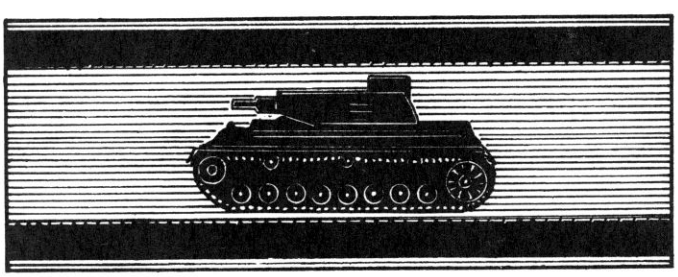
On 9 March 1942, the OKH created a special award to recognize the individual efforts of the infantryman in successful anti-tank defense. This award was designated as the "Panzervernichtungsabzeichen" (Tank Destruction Badge); actually this was a "short" term as the full designation for the award was: "Sonderabzeichen für das Niederkämpfen von Panzerkampfwagen usw. durch Einzelkämpfer" (or Special Badge for Close Combat with Tanks (and other armored vehicles) with Hand Weapons). Although initially designed for award to successful infantrymen, the award was broadened to include other branches of service; in fact, anyone could be awarded the badge for the destruction of an enemy armored vehicle.

The actual badge consisted of an aluminum-thread, flat-woven ribbon, measuring 90mm long and 32 mm high; the ribbon was aluminum in color with two black stripes at top and bottom. In the center of the ribbon was an artistically-styled tank (somewhat resembling a Panzer IV,) constructed of black metal. This black-metal miniature was pinned to the woven-aluminum ribbon; in early versions, the metal pin was "blued" (chemically treated to produce a blue-black finish) and on the late style badges, the miniature was simply painted black. This award was for the destruction of a single enemy vehicle, and it was worn sewn to the upper right arm (above the elbow, centered between elbow and shoulder seam) of the tunic. An identical award was given for each subsequent enemy vehicle destroyed; this second (or third) award was



Individual Anti-Tank Weapons in the German Wehrmacht

sewn to the upper right sleeve beneath the original award. After a number of multiple-tank awards, the Panzervernichtungsabzeichen was modified so that the fifth award consisted of a similar badge, however, woven from gold thread instead of the normal aluminum. In addition, the black-metal "tank" pin was replaced with one made of gold (or gilt) metal. The recipient of the fifth award replaced the previously-awarded four "black" badges with the single gold fifth award. Thus, a holder of seven badges would wear one gold decoration and two of the black decorations beneath it... It should be emphasized that this "gold" fifth award was a later modification and there were a number of holders of five awards that wore all five black badges on their uniforms. (The photograph in the next column shows an Army officer wearing five black awards on his sleeve; he had just been awarded the Knight's Cross of the Iron Cross, and was attending a reception sponsored by Dr. Josef Goebbels, the Reichs Propaganda Minister.



The "Panzervernichtungsabzeichen" soon became an unofficial badge of professionalism on the Eastern Front, for it signified a soldier with a high degree of training and competance; in other words, one who could be trusted not to panic in an emergency situation. On the Eastern Front, an infantryman's expertise could be measured by how long he stayed alive, and there were not many veterans in 1944-45 with more than five of the tank destruction awards; those that were so decorated were generally non-commissioned officers or officers with an excellent leadership potential.

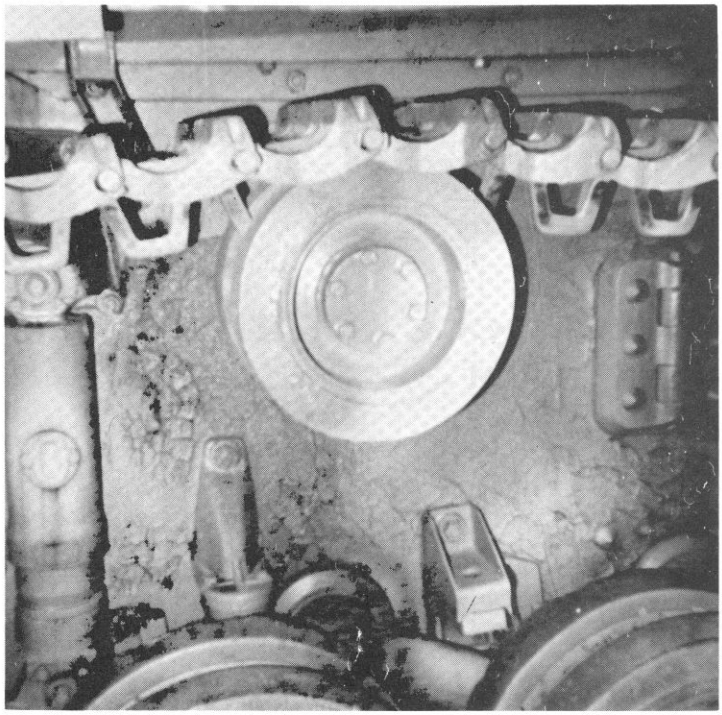
The tactics involved with a tank hunter stalking an enemy armored vehicle will be discussed in future articles, along with the hand weapons that were used with good results. It should be mentioned that close-combat against enemy tanks became so successful a method of defense that the German Army began to form Panzer-Jagd-Kommando units in late 1944; these units were formed with sections of individual tank hunters to trap and destroy Soviet T-34's and JS-II's, using hand weapons.

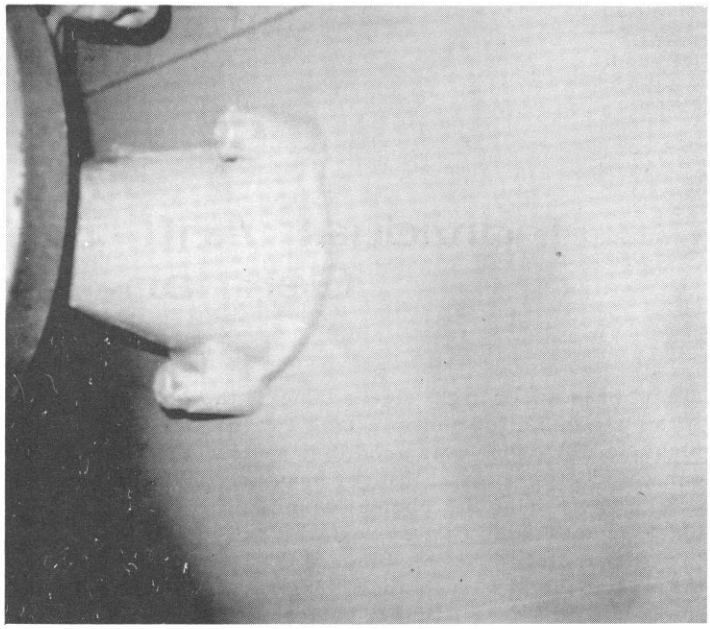


About the Author: Kurt Fischer writes about German operations on the Eastern Front with a good background of experience. He served in the German Army from 1940-45, in the Panzerjäger (or Anti-Tank) branch. At war's end, he commanded a battery of Sturmgeschütz III's, and had been awarded three Tank Destruction badges.....

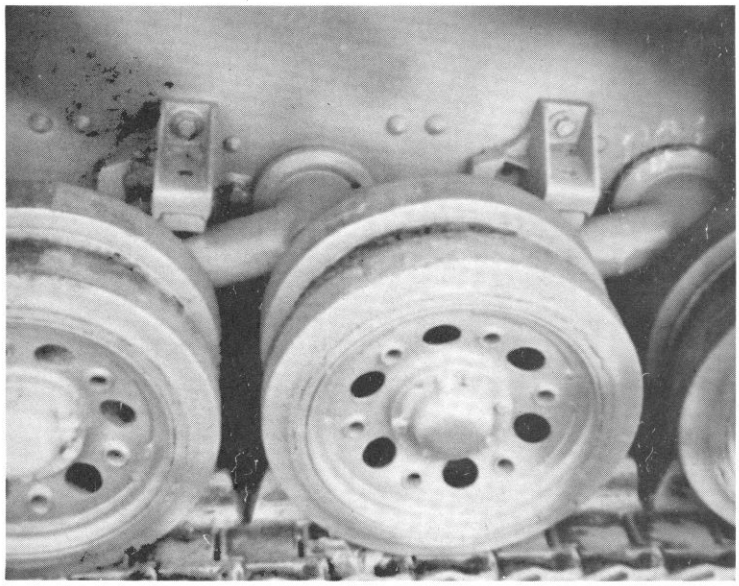
Some Notes on SUPERDETAILING TAMIYA'S PANZER III.

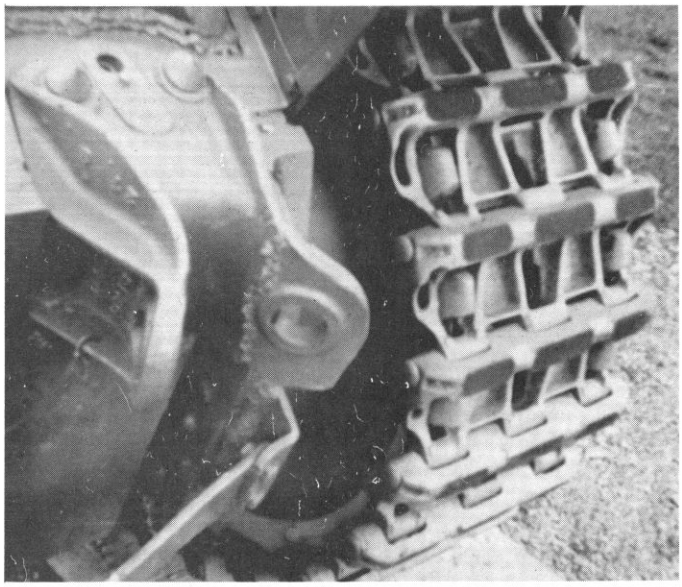
by Ron McGlothlen





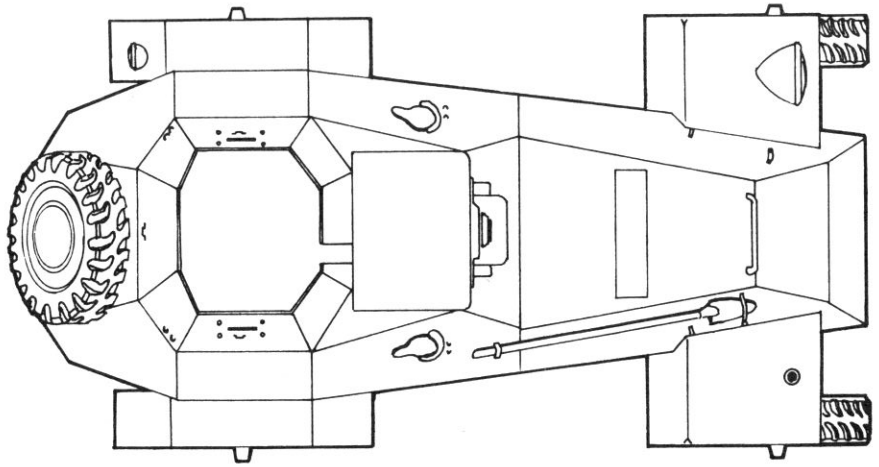
The photos above show one of the major areas of difficulty in the Tamiya model of the Panzer III, the suspension. The photos show the mounting details and configuration of the return rollers, and a comparison of the photos with the model will show the changes that are necessary. One area of difference is in the spacing between the parts of the road wheels and return rollers; the spacing in the kit is too large and should be reduced for maximum accuracy. Note the cone-shaped mounting bracket for the return roller, fastened to the hull by three bolts.





The photo on the left shows the road wheel details; notice the torsion arms and the mounting brackets. Close comparison will reveal modifications which should be made to the wheels. As indicated above the spacing between front and rear wheels is excessive. The photo on the right illustrates details of the track and the brackets for the towing hooks, which are identical on both sides. These photographs are of a Panzerkampfwagen III., Ausführung E, although most suspension details are identical on all but the earliest models.

Note- Armament, which usually consisted of one 7.62mm Degtyarev DT machine gun, is not shown due to lack of information on the mount.

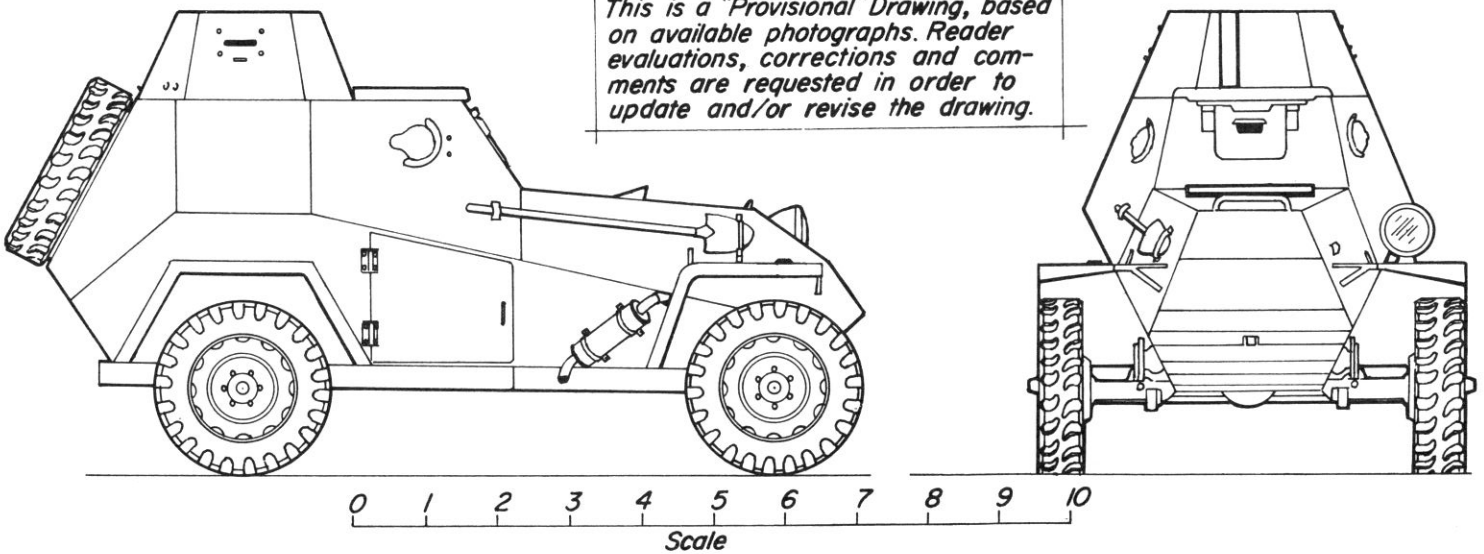


Russian BA-64 Armored Car

Drawn by:

J. Steuard

This is a "Provisional" Drawing, based on available photographs. Reader evaluations, corrections and comments are requested in order to update and/or revise the drawing.



Many thanks to Mr. A. J. Clemens for his assistance in the preparation of these drawings.



Book Review: Soviet Panzers in Action, Armor No. 6, by Uwe Feist (Squadron/Signal Publications, Warren, Mich. $3.95)

Review by Wayne Larson

This latest in the series of armor soft-cover books from Squadron/Signal illustrates Soviet armored equipment. Most of the 103 photographs depict Russian vehicles either destroyed or captured by the Germans, and others show pieces of Soviet armor on display at Aberdeen Proving Ground. The photographic coverage is excellent; the pictures show modeling details and will be most valuable to anyone collecting information and photographs of Russian vehicular equipment. In this book, you will find material on the T-60, T-70, SU-76, T-26, BT-5, BT-7, T-28, T-35, KV-I, KV-II, T-34/76, T-34/85, SU-85 and others.....along with the photos, there are a total of nine colored side-view drawings, showing typical markings and drawn to the same scale.

I was hard-pressed to determine the reason why the title is "Soviet Panzers..."; perhaps this is because most of the pictures came from German sources? Another reason might be the very pro-German background of the author. At any rate, the title sounds most trite to me, mixing both German and English it titling a book on Russian equipment. I looked hard to find those promised "action" photos, but could find little to justify such a claim. I was pleased, however, to find a collection of good photos of Russian equipment at such a modest price, and Squadron/Signal must be complimented on this latest publication.

Book Review: U. S. Armor - Cavalry, a Short History, 1917-1967, by Duncan Crow (Profile Publications, Ltd., Windsor, Berkshire, England, $6.95)

Review by Duane Thomas

Written in five parts, this book covers the development, growth and organization of armor/cavalry units in the U.S. Army. Copiously illustrated with photographs, some of which are quite unusual and rare, this volume goes a long-way towards filling the gap in literature covering American armor. Along with the photographs, there are approximately 32 sets of colored illustrations depicting regimental shields and crests (which are current under the Combat Arms Regimental System of the U.S. Army).

The author shows an excellent grasp of U.S. Army history and organization; the book is well-written and will make most-enjoyable fireside reading for a number of evenings. The biggest area of criticism that I have with the publication is its lack of detailed material on the pre-1940 period. This area of history, representing 33 years of material, is covered in only 13 pages of text. While there's quite a bit of material on wartime and post-war armor history, I really feel there could have been much more on the 1920's and 1930's. I might also have wished for expanded photo captions, which are altogether too brief in many cases. But these are really minor criticisms in light of the information presented in this excellent publication, which can be well recommended to students of U.S. Army history.

Book Review: Wehrmacht Camouflage and Markings 1939-1945, by W. J. K. Davies (Almark Publication, London, England, $2.95)

Review by James Steuard

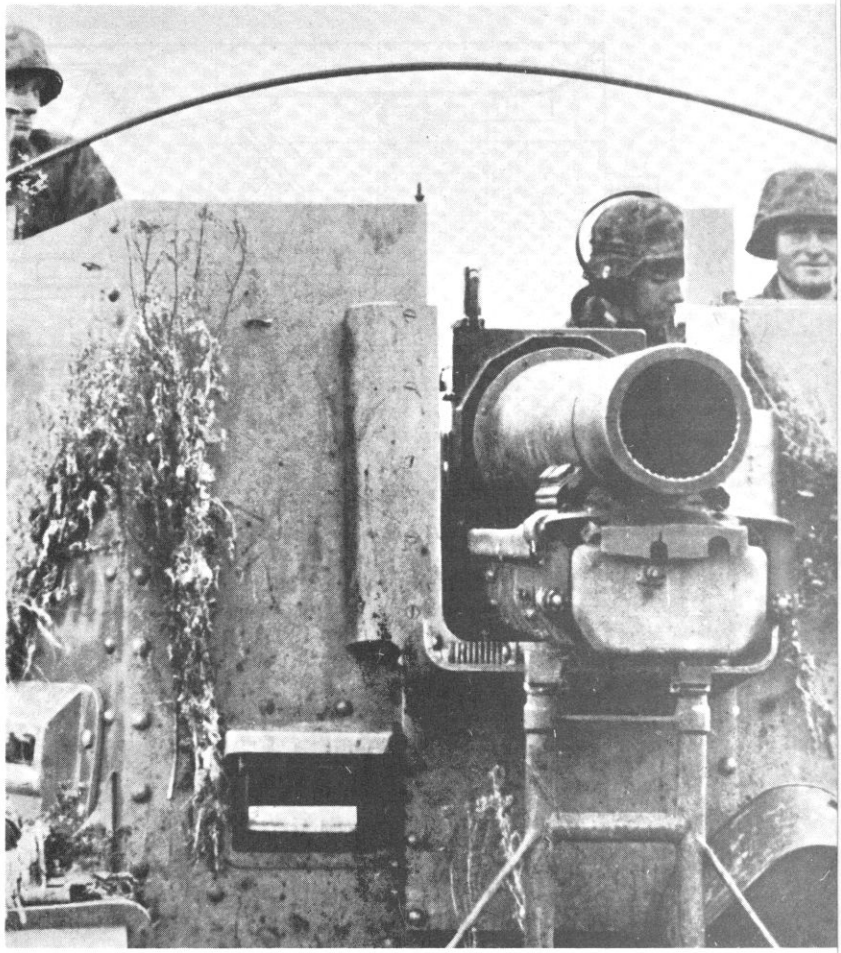
Writing a review of Wehrmacht Camouflage and Markings is difficult, not because of the depth and detail and general accuracy of the publication, but because of the number of omissions and errors present in this recent book by Almarks. Indeed, one of the great problems with this book is the number of erroneous statements which are presented as facts to the readers.

While the book was excellently printed on expensive paper, it's too bad that the pen-and-ink "Typical Divisional Insignia" (on pages 9 and 11) and the "AFV Symbols" (on page 16) are so crudely drawn. I got the distinct impression in some cases that the "artist" 1) had never seen the original markings that he was drawing, and 2) he didn't quite know how to use standard drafting tools and instruments. The colored views of vehicles, done by some familiar names of "Airfix Magazine" authors, also didn't quite make-it with me. Some of the artwork is too crude to believe, and is virtually devoid of useful details.....

I must offer credit to Almarks (or to the author) for providing some rather interesting photographs, even if I think that I've seen some of them before in other Almarks publications. The photo captions are abismal....there's a number of wrong or erroneous statements, and in general, the captions are to be noted more for what they do not tell. For example, the photo on page 13 of the 1.SS-Panzer-Grenadier-Division Panzer IV. in Milan, Italy in October 1943 indicates that "a shield outline...was a feature of most SS-Panzer-Division signs." As a matter of fact, of the seven SS-Panzer-Divisions, only two used a shield outline as a part of their tactical marking. This caption further states that the "symbol could also be seen as a plain key as illustrated..." this reviewer would be most pleased to see a photo of a "Leibstandarte" vehicle with just a "plain key" as its tactical marking.....Other captions are equally poor, and we just do not have the space in this review to list more of the errors....which include battalion markings (or emblems) being mis-called "crew's personal emblems", and well-known regimental and battalion insignia being mis-identified or left unrecognized (or ignored).....

- Continued on Page 32 -

COMPARISON of ARMORED-INFANTRY SUPPORT VEHICLES of WORLD WAR II.



Above: A Waffen-SS 15cm s.I.G.33 auf Gw.38(t) "Bison" Infantry Gun emplaced and ready to fire. Note the gun commander with earphones waiting for orders.

This article is in response to several reader requests which originated with the previous article on the German 15cm s.I.G.33 mounted on the Czech 38(t) chassis (appearing in Vol.4, No.2). These readers wanted some information on "parallel" developments in other countries to the Infanterie-Geschütz concept of the Germans.

As a preface, it should be indicated that the 15cm heavy infantry gun mounting described in the previous article was not the sole German effort in armored-infantry support weapons, although it was the largest caliber weapon. The Germans also mounted the short-barreled 7.5cm KwK (or Stuk) 37 in various wheeled and halftracked armored vehicles for the same basic purpose of supporting infantry units in attack and defense. With this in mind, some indication of similar vehicle projects in other countries might prove interesting.

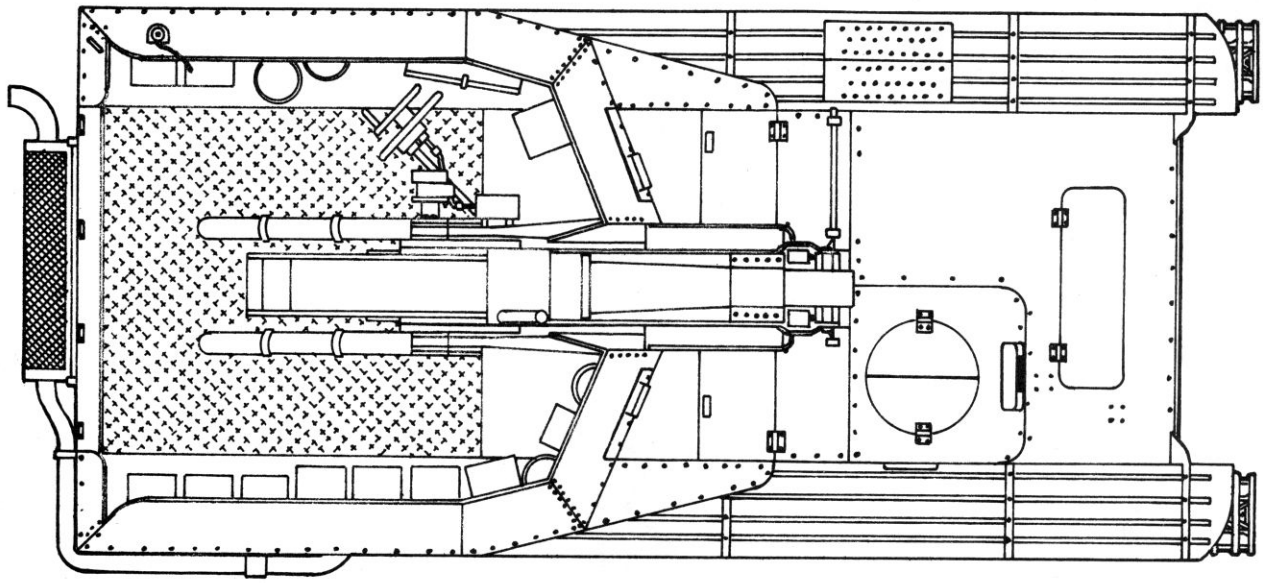
In the British Army, a similar concept was followed in mounting short-barreled howitzers in tanks, which were then designated as "CS" (or Close-Support) tanks. These vehicles differed from the basic tank only in armament, and thus had the same basic mobility of the "parent" tank. Although the howitzers did not use armor-piercing ammunition, their howitzers were useful for demolition of pillboxes and obstacles. CS tanks, however, were not infantry support vehicles; they were instead an organic part of British Tank Squadrons (there being two such vehicles in the Squadron's Headquarters Troop), for the support of tank operations. Another similar vehicle in the British Army was the AVRE (or Armored Vehicle Royal Engineers). Essentially, this was a Churchill tank modified to carry a "spigot" mortar or "petard" as its principal armament. This short-barreled weapon fired a rodded-bomb (often called a "flying dustbin") for the elimination of obstacles at rather close range. As this was purely an engineer vehicle, it cannot be accurately described as an infantry-support weapons system.....

In the U.S. Army, each Infantry Regiment had an organic Cannon Company, which is the closest parallel that can be found to the German Infanterie-Geschütz-Kompanie outside of Germany. Although primarily armed with towed weapons, there was a period of time during 1943 when this unit was armed with 75mm M3 Gun Motor Carriages (which were obsolete for tank destroyer units); the M3 mounted a fairly high-velocity M1897 75mm gun on an open-topped halftrack armored-infantry vehicle. Other than this vehicle, the Cannon Companies relied on towed weapons, which varied from 57mm to 105mm in caliber. Armored support vehicles were used in U.S. Army Tank Battalions, where they formed an "Assault Gun Platoon" of the Headquarters Company. During the European operations, this platoon was equipped with the 75mm M8 Howitzer Motor Carriage; this was an M5 Light Tank with an open-topped turret mounting a version of the 75mm Mountain Pack Howitzer, which was the maximum size of ordnance that could be mounted in the small turret ring of the light tank. As with similar British vehicles, the M8 had roughly the same mobility of the standard light tank, and it was used in identical roles for support of tank operations. During the last year of the war, the M8's were replaced with 105mm howitzer-armed versions of the M4 Sherman medium tank, which sered in an identical role.

In the Russian Army, self-propelled artillery weapons were provided to Infantry Corps and Divisions for support of operations; these weapons were assigned to artillery units instead of to the infantry, and since the assignment was on a temporary basis, this form of support cannot be considered "regular". The weapons that were employed, at least during the 1944-45 period, were generally SU-76's, an open-topped, lightly-armored vehicle based on the T70 light tank chassis (which was lengthened by the addition of one road wheel per side). The 76mm gun was a fairly high-velocity (and flat trajectory) rifle that was similar to the 75mm gun of the M3 GMC, in that it too was previously used as an anti-tank gun, and was relagated to infantry-support duties.

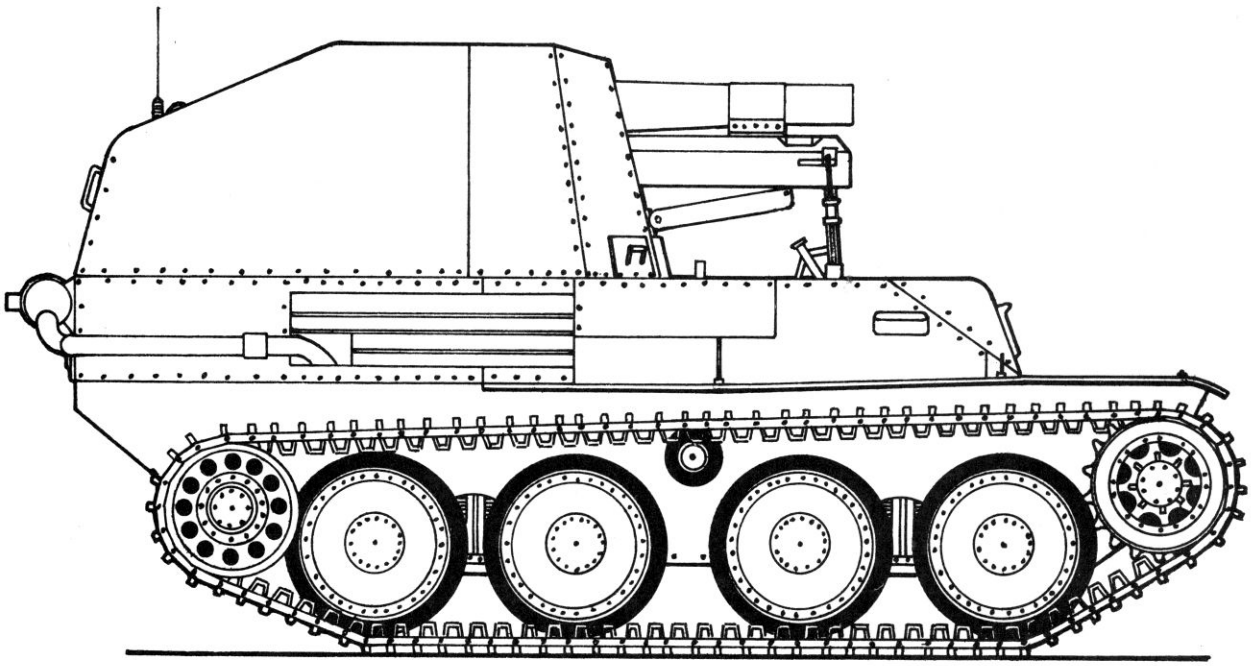
From the above survey, it can be appreciated that the German 15cm s.I.G.33 on its self-propelled gun

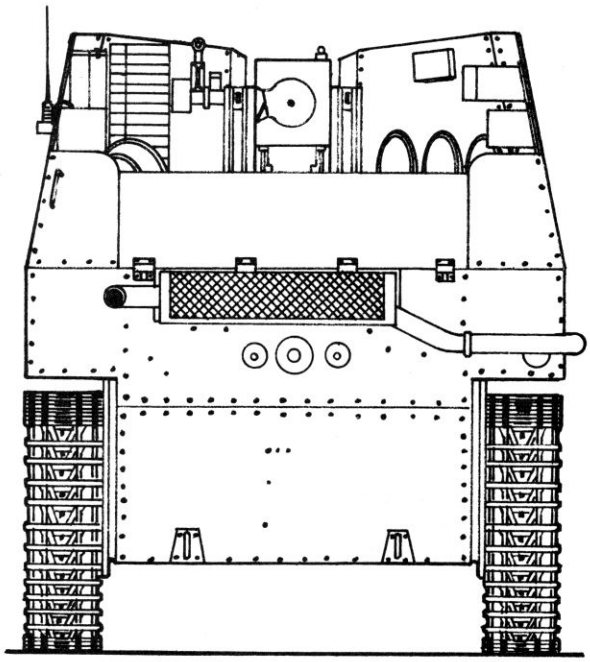
- Continued on Page 32 -

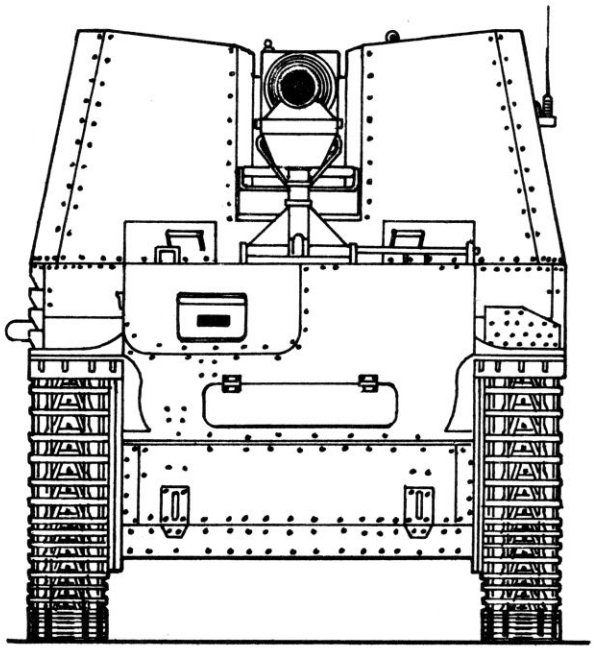


15cm schwere-Infanterie-Geschütz 33/1 auf

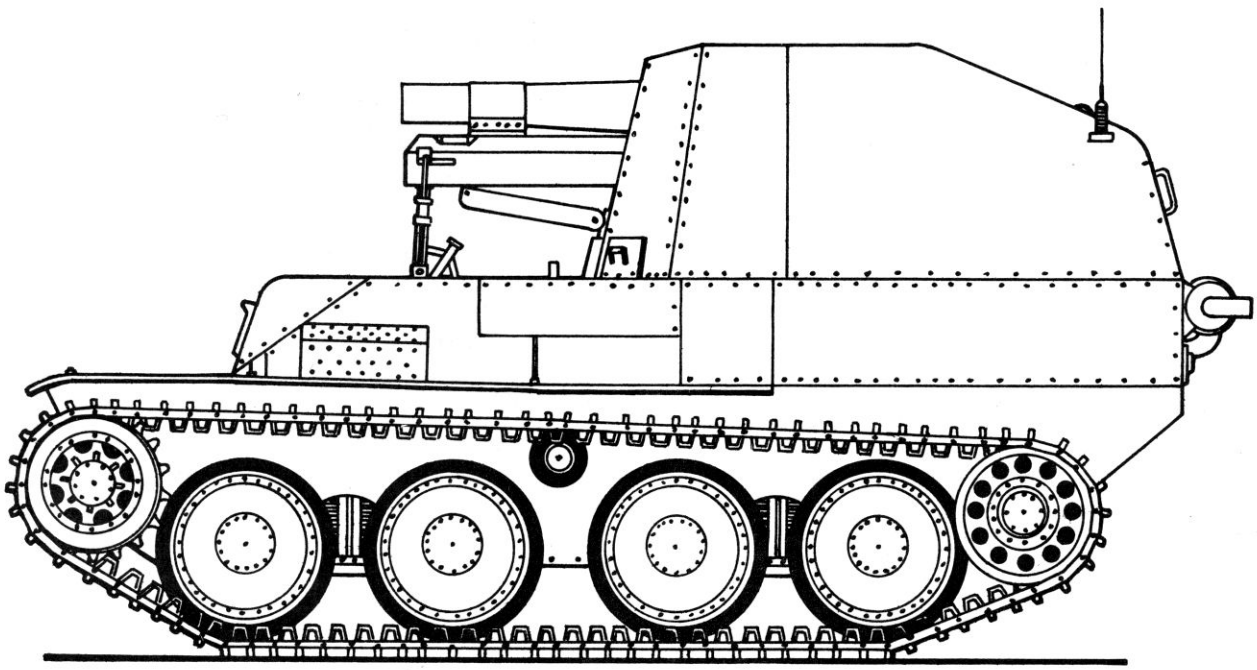
DRAWN BY: STEVEN R. COBB
SCALE: 1/32 (3/8" = 1'- 0")







Selbstfahrlafette 38(t), Ausführung M



COLOR 'N CAMOUFLAGE

This month's article covers two different versions of the German World War II. Volkswagen Type 82 light car popularily known as the "Kübelwagen", manufactured from 1940 to 1945 and used by virtually every unit of the Wehrmacht for light transportation.

Volkswagen Type 82 Kübelwagen of SS-Division (mot.) "Wiking" in Russia, Summer 1942

This example was observed in a rather poor photograph that showed vehicles advancing during the German summer offensive of 1942 (which had the goal of capturing the Caucasian oil fields);the vehicle was in company with typical reconnaissance vehicles (a Sd.Kfz. 222 armored car and two motorcycles), and it is not totally clear if the Kübelwagen was assigned to the reconnaissance battalion or was serving as a staff vehicle for a higher command.....

Judging from other "tones" in the photograph, it appears that this Waffen-SS Kübelwagen was painted in an overall color of "feldgrau", the warm green-gray color that was used on some items of equipment in the German Wehrmacht prior to 1943. This overall paint finish was extended to include a light-canvas covering over the vehicular spare tire and cloth covers over both headlights. (These latter covers had narrow horizonal slits in them to permit their use as "combat driving lights".) It would appear that the overall "feldgrau" paint finish also extended to the Kübelwagen's interior.

In common with all wheeled-vehicles of the Wehrmacht, this Waffen-SS military Volkswagen carried the standard-form of front and rear license plates. These were stamped from thin aluminum and painted white with black letters and numbers. The front license plates measured 90mm high and 475mm in length, with the vehicle license number appearing in one row of figures, as shown on the next page. This front plate was fastened to the flat squared-off front of the vehicle below the spare tire. The rear license plate measured 200mm high and 325mm in width; the license number appeared on this plate in two rows with the letters above the numbers. This rear plate was mounted on the left side of the engine compartment access door, just below the combination tail and blackout light. Both the front and rear license plates on this Waffen-SS vehicle carried the "Dienststemple" or rubber-stamp marking that identified the unit (quite possibly for security purposes) by "Feldpost" number. This black marking was typically positioned as shown.

The divisional-tactical-marking for SS-Division "Wiking" (as it was designated at this time) was painted in white on both front and rear of the Kübelwagen. This tactical marking consisted of a symbol (known as the "Sonnenrad" or Sun Wheel) which resembled a Swastika with curved outer limbs. On the front, this symbol was painted on the right fender, immediately below the headlight; it appears to have been approximately 5-inches in diameter. On the rear, the symbol was painted adjacent to the rear license plate; it this case, the symbol was approximately 7-inches in diameter.

The photograph does not show the use of other "small unit" tactical markings that would normally identify the using unit of the division.

The vehicle described in this article carried one other form of insignia that seems to have been peculiar to SS-Division "Wiking" during this period of time. This insignia took the form of a white Swastika painted on the canvas spare-tire cover, apparently as a form of air-recognition insignia. Judging by the number of photographs of Kübelwagens from SS-Division "Wiking" displaying this insignia on the spare-tire cover, it was a "standard" marking of the period. On our example, the white Swastika was painted slightly larger than the circular top of the cover, and thus the ends of the Swastika's arms extended downward onto the tire's surface area, as illustrated.

Volkswagen Type 82 Kübelwagen of Nachrichten Regiment "Panzer-Armee-Afrika" in Tunisia, Spring 1943

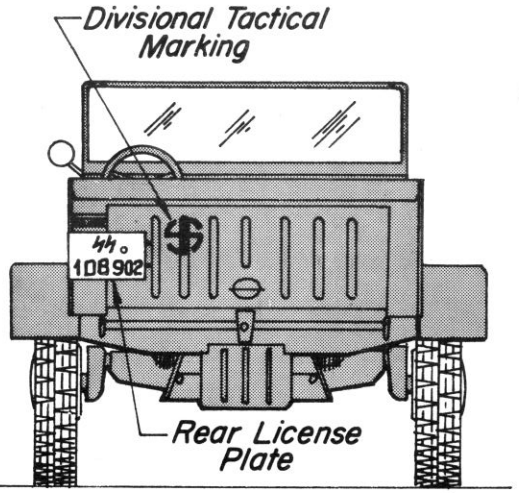
This vehicle was observed in a photograph of a military garage in Tunis; the photograph was taken following the Allied occupation of the city. Judging by the appearance of the vehicle, it was one of the vehicles that were brought into Tunisia during the build-up of German forces that took place during the Winter of 1942-43. The Nachrichten- (or Signal) Regiment that this vehicle belonged to was formed following the creation of "Panzer-Armee-Afrika" (which was placed under the command of Feldmarschall Rommel) for the signal-support of the army.

The paint finish on this particular vehicle seems to be overall Sand-Tan Primer paint; the finish that was factory-applied as "standard" starting in 1943. Readers are referred to AFV-G2, Vol. 4, No. 3 for a paint-chip of this color. The vehicle was equipped with the standard European accessories; tires were normal issue (and not the "balloon" sand-tires commonly used by the DAK) and the car did not have sand filters or the hood over the air-intakes (above the engine compartment).....

Standard front and rear license plates were fastened to the vehicle; the numbers "WH 905 477" cannot be completely verified as the photographs do not show all the numbers clearly. (The photo shows all but the last two digits). It does not appear that the rubber stamped "Dienststemple" had been applied to the license plates of this vehicle; a number of vehicles in Tunisia during this period of time were lacking in this marking.....

As "Panzer-Armee-Afrika" was completely different (and separate) from the older "Deutsches-Afrika-Korps", the familiar "palm and swastika" tactical marking of the DAK did not appear on vehicles of the higher headquarters. Instead, the regimental tactical marking appeared in outline-fashion on the front doors of the Kübelwagen. This symbol was applied in black, and consisted of an outline style map of the continent of Africa, with an upward-pointing Signal "blitz" in the center of the marking. One veteran has indicated that the outline style map of Africa was the marking of the "Panzer-Armee" but this has not been verified. The Nachrichten-Regiment tactical symbol has been observed on two other vehicles; on one it appeared in several colors.....and it seems that this unusual location (on the doors) was commonly used in this unit.

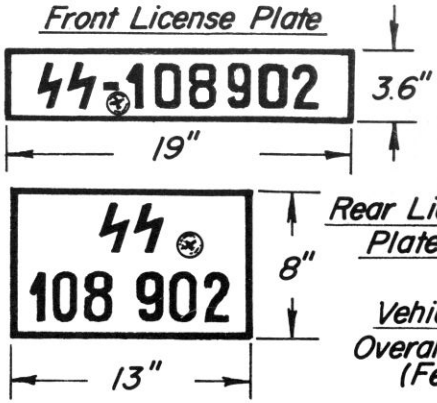
Volkswagen Type 82
SS-Division (mot.) „Wiking"
Russia - Summer 1942



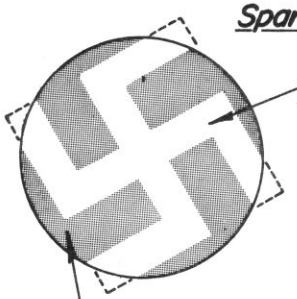
Tactical Marking

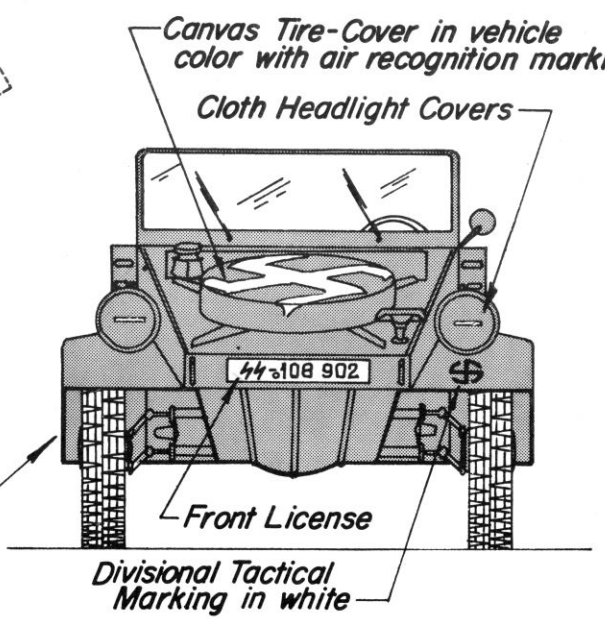


Front License Plate

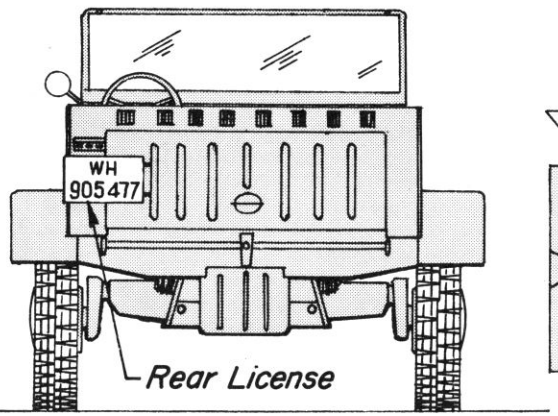


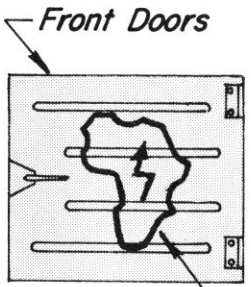
Spare Tire Cover



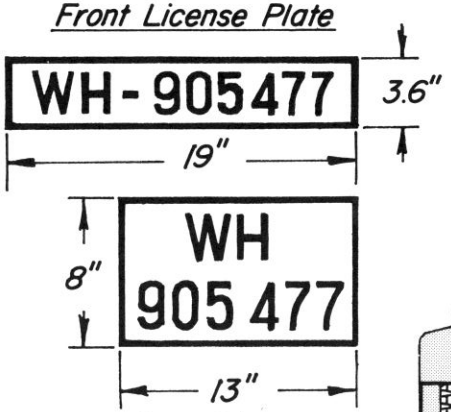


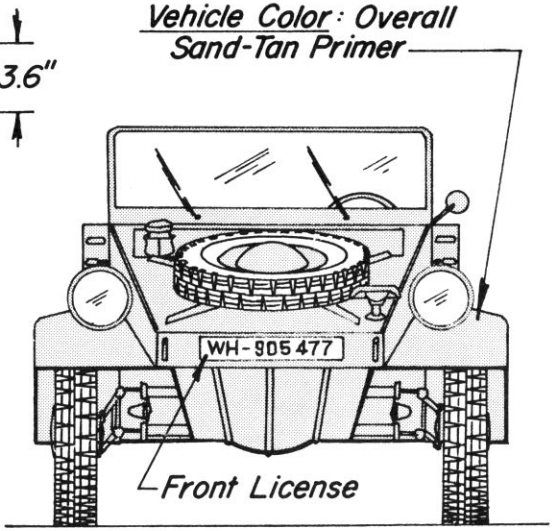
Volkswagen Type 82
Nachrichten-Regt. „Pz.Armee-Afrika"
Tunisia - Spring 1943





Front License Plate

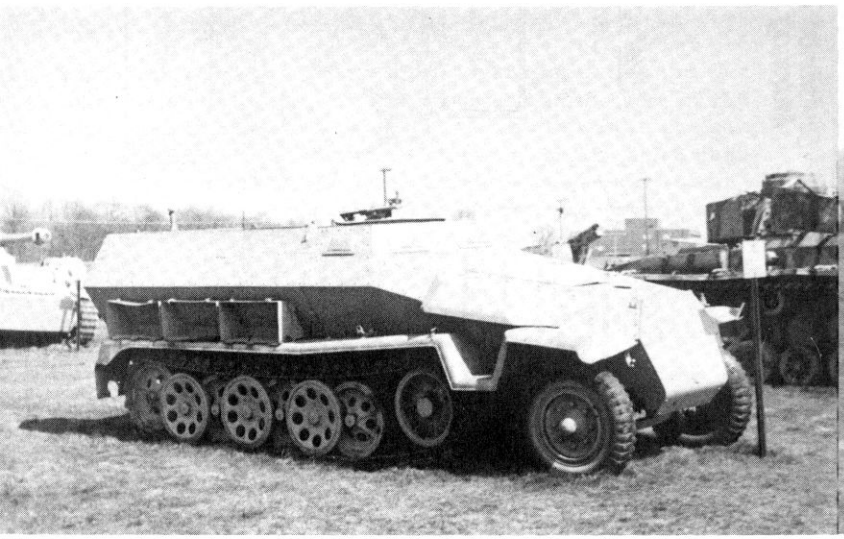




ARMOR IN PICTURES

"Armor in Pictures" is a photographic-article series to display reader-submitted material on military vehicles and associated models or dioramas. Readers are invited to submit their photographs of vehicles for inclusion in this series. Photos should be packed securely, preferably between sheets of cardboard, to prevent folding, and sent to AFV-G2, P. O. Box 293, La Puente, CA 91747, Attn: "Armor in Pictures". Credit will be given in the photo caption for all photos published and all photos will be returned after publication, along with a copy of the magazine in which the pictures appear.

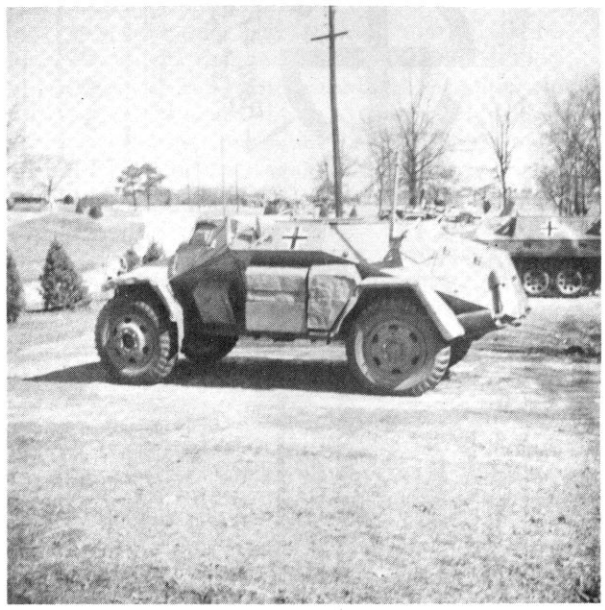
"Armor in Pictures" is also designed to serve readers as a forum for photo requests. If there's a particular photo reference needed, for modeling, for data, for accurate markings, etc., drop AFV-G2 a note (at the above address(to let the staff know what is required. Our staff will attempt to provide the photos that the readers wish to see, and we'll also provide a list of requested photos that readers are searching for.



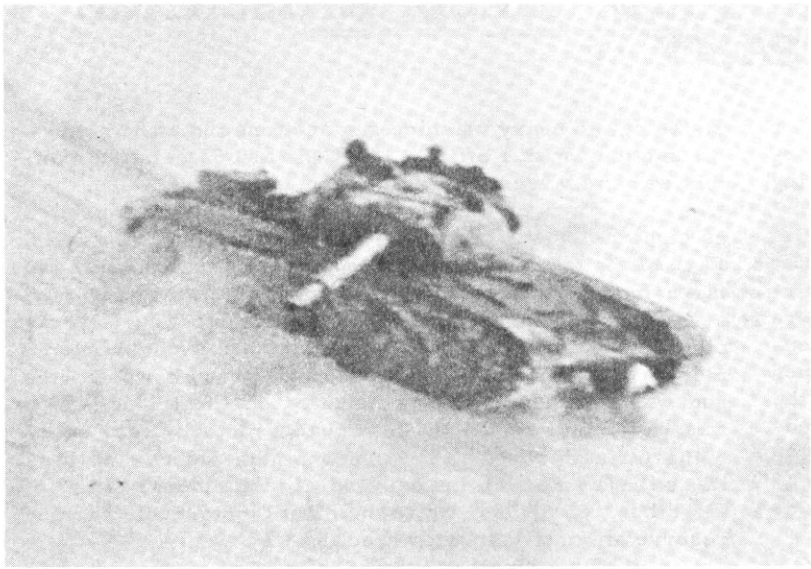


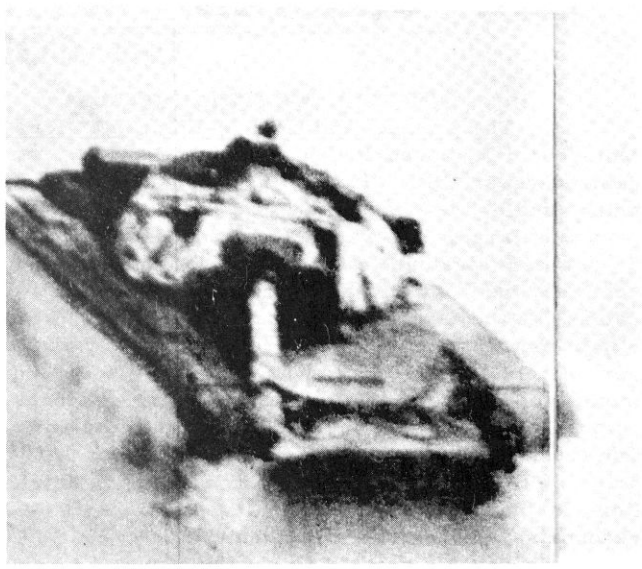
The two photos above were supplied by Rob Harven of Wanamassa, New Jersey, who took them at Aberdeen Proving Ground recently. The photo on the left shows where Tamiya found the research for their new Hanomag kit. Although termed as the Sd. Kfz. 251, Ausf. A, it appears to be an Ausf. C with heavy machine gun mount mounted above the driver's compartment. The photo on the right shows a Char Leger R-35 light tank in original finish. Rob writes that the museum staff has been in the process of repainting many of the vehicles, and bringing-out additional vehicles that have been in storage since the late 1940's, including a Pzkw. I, Ausf. B, a Pzkw. II, Ausf. F and a Sd. Kfz. 164 Nashorn.





The two photos immediately above were provided by Geoff Walden of Covington, Kentucky. The photo on the left shows a destroyed German Jagdtiger (Sd. Kfz. 186) which was photographed in Germany in 1946. Apparently the vehicle was blown-up to prevent capture; this was a common practice toward the end of the war, two explosive charges were carried in the tank expressively for this purpose. The photo on the right shows the Sd. Kfz. 223 armored car at Fort Knox, Kentucky which was shown in Vol. 4, No. 3. The vehicle has been restored with new tires and a new paint job. Unfortunately, the radio aerial was removed and the choice of paint color leave something to be desired.





The two photos above are the first to be seen in the West of the new Soviet medium tank. Designated as the M-1970 by NATO forces, the new tank has a suspension (barely seen in the left photo) resembling that of the JS-III and T-10 tanks, with smaller diameter road wheels and return rollers. The position of the bore-evacuator resembles that of the T-62, and this vehicle may carry the same 115mm smooth-bore gun. These photos appeared in color in "Sovetskii Voin" of May 15th, 1970 (on page 11).

UNKNOWN VEHICLE ANSWER:

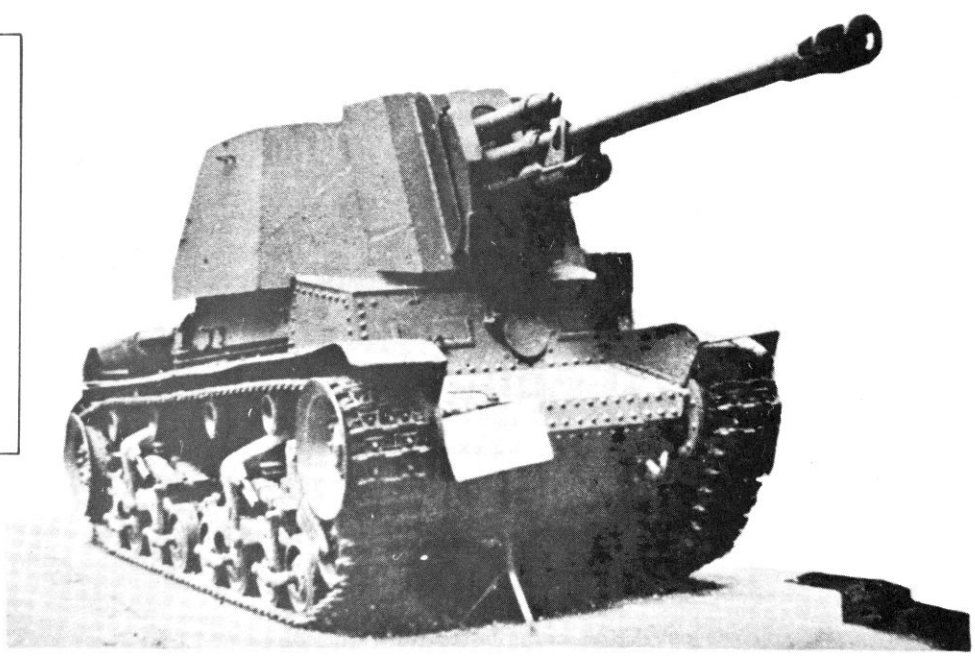
The solution to the unknown vehicle photograph that appeared in the last issue was supplied by Col. R. J. Icks, Ret'd and James W. Loop. The vehicle is an armored car built in Australia in the late 1930's. Barely seen in last issue's photo is the registration number ending in the numbers "222"; this was prefaced by the letters "DD" which indicated "Department of Defense". These vehicles were manufactured on commercial Ford 1-1/2 ton truck chassis, in various configurations. Our identification sources are not positive of which exact variant of truck chassis from which the vehicle was created, but it could quite well be the "Truck, 30 cwt, 4x2, GS (Aust) (Ford OIT)" powered by an 85 hp V8 engine, as described on pp. 234 of "The Observer's Fighting Vehicles Directory (Revised Edition)". It appears that these vehicles equipped the 1st and 2nd Armored Car Regiments of the Australian Army. The black panel on the door of the vehicle in the photograph identifies the unit of assignment, and reads "1" (on the top line), "Armd. C." (second line) "Regt." (third line), with the vehicle identification number (listed as "A. C. 222") on the bottom line separated from the regiment by a white triangle. This appears to have been a standard marking on these Australian vehicles, which served during World War II in Australia.

WANTED PHOTOS:

We have received requests for photographic coverage of the following subjects:

1. Interior and driver's compartment of the Sd. Kfz. 251/1.
2. Breach and gun details of the 7.5cm KwK 37, L24 gun.
3. Breach and gun details of the 7.5cm Pak 40 towed gun.
4. Cupola interior of the Panzer VI. "Tiger I." and the Panzer IV. medium tank.

This issue's unknown vehicle is shown at the right; it's obviously some form of a SP gun..... Can anyone provide an identification of this vehicle.....?



THE GERMAN MOTORCYCLE RECONNAISSANCE COMPANY

The Panzer-Aufklärungs-Kompanie (Krad), or Motorcycle Armored-Reconnaissance Company, was organized under KStN 1112, with the 1943-type unit being authorized by the KStN dated 1 November 1943. The company was large, by any army's standards, with 3 officers, 35 non-commissioned officers and 190 enlisted men. For vehicles, the company was largely equipped with motorcycles, as the name of the unit might suggest. There were 5 light motorcycles (which were used strictly as messenger vehicles), and 55 of the "heavy" side-car equipped motorcycles, which equipped the "fighting" platoons of the company. In addition, there were 8 light cars and 6 medium trucks in the unit. It should be pointed-out that, at this stage of the war, there were a good many infantry battalions in the German Army with less soldiers than this one reconnaissance company-sized unit!

The Motorcycle Reconnaissance Company was organized with the following sub-units:

Headquarters & Headquarters Section
First (Motorcycle) Platoon
Second (Motorcycle) Platoon
Third (Motorcycle) Platoon
Fourth (Weapons) Platoon
Maintenance Section
Administrative, Mess and Supply Section
Company Trains

Readers will undoubtedly notice the great similarity of this motorcycle unit with regular infantry-type companies; and indeed, this similarity is more than casual.

The small Company Headquarters Section is organized with two light cars and five motorcycles (of which two are of the "heavy" type). The Company Commander, usually an Oberleutnant or First Lieutenant, rode in one of the cars, accompanied by his "Gefechtsschreiber" clerk and a radioman/messenger. The other car was used by the small Signal section. The Motor Sergeant and the Non-commissioned Medic rode in the sidecars of the heavy motorcycles, with the other light cycles being used as dispatch messengers.

Each of the three Motorcycle Platoons was organized in a manner virtually identical to the standard Infantry "Rifle" Platoon, motorized with motorcycles. There was a small Platoon Headquarters (which existed mainly for communications and control), and three Squads, each with four heavy, sidecar-equipped Motorcycles. Each of the Squads was organized around two light machine guns, of either the MG34 or MG42 type. These guns were pintle-mounted on the sidecars of two of the Squad's cycles, and could be operated while the vehicles were in motion. One of the other cycles carried the Squad Leader, while the fourth cycle carried two riflemen (in addition to the driver). It should be emphasized that each of the Squad's four motorcycles carried three soldiers; one in the sidecar, one driving the cycle and one on the "pillion" seat behind the driver. In addition to their individual weapons, every motorcycle shared the load of carrying extra machine gun ammunition. One can only imagine how crowded and uncomfortable these motorcycles became during prolonged operations.....

The Fourth Platoon was referred to as the "schwere" (or heavy) Zug; it transported and operated the unit's heavy weapons. The small Platoon Headquarters Section consisted of two light cars (for communications and control) and two "messenger" motorcycles. The Platoon consisted of two heavy machine gun sections and an 8cm mortar section. With 1 officer, 10 NCO's and 53 enlisted men, this was the largest sub-unit of the company.

Each of the two machine gun sections consisted of eight heavy motorcycles, and two heavy machine guns. Each of the two guns was handled by a Squad which utilized three motorcycles to carry the gun, the awkward (and heavy) tripod and a supply of ammunition. The gun was pintle-mounted on one of the cycles, where it could be employed while in motion. For support-fires, however, the gun was dismounted, being mounted on the tripod (which was carried by another of the Squad's motorcycles, occupying virtually the entire floor of the sidecar while in transit. The Section Leader rode in the sidecar of one of the other two cycles, while the eighth motorcycle carried reserve ammunition for the section.

The small Mortar Section was transported in two medium trucks, each carrying one of the mortars and its crew, in addition to the supply of ammunition. These weapons were not fired from the vehicles, but were dismounted for action when the tactical situation required.

The company's Maintenance Section was quite small, when compared to other units and to the large number of vehicles that the company utilized. With two NCO's and five enlisted men, the section had one light car and a medium truck to carry supplies and spare parts.

The Administrative, Mess and Supply Section, as its name implies, took care of the non-combat functions within the company. One of the trucks carried the small (two man) Mess, while the other medium truck transported supplies and equipment. This section was normally under the control of the company's First Sergeant, and it traveled with the parent battalion's administrative echelon while the motorcycle company was performing its assigned reconnaissance tasks.

The Company Trains, even though small in the number of assigned personnel and its one medium truck, was important to the company because it transported the baggage of the unit. When one considers the limited storage on the unit's motorcycles, which precluded carrying such items as bedding and spare clothing, the Trains vehicle must have been a popular sight, if only for comforts sake.....

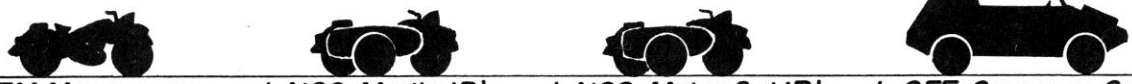
The organization charts on the following two pages illustrate the final revision of the Panzer-Aufklärungs-Kompanie (Krad) during the course of the war. Earlier units of this pattern were almost identical, but were referred to as "Kradschützen-Kompanien", a term that is far more descriptive of the unit's functions. There were numerous reasons why this unit was deleted from the 1944 Panzer-Aufklärungs-Abteilung, and prime among these must have been the lack of armor protection, the lack of creature comforts (such as heat on the Russian front during winter, and space to carry belongings), and a certain lack of cross-country mobility necessary in reconnaissance units in order to perform their missions.

It appears that a few of these motorcycle units survived disbandment, and were used as reconnaissance companies in divisions which operated over well defined road nets, in climate that was suited to their operation. Such units were in existance into 1944-45 in Italy, the Balkans and other areas where the many liabilities were lessened in their effects upon the companies.

PANZER-AUFKLARUNGS-KOMPANIE (KRAD)

KStN 1112 of 1 November 1943

HEADQUARTERS SECTION



1 EM Messenger (R)

1 NCO Medic (P)
1 EM Driver (R)

1 NCO Motor Sgt.(R)
1 EM Driver (R)

1 OFF Company Commander (MP)
1 NCO Section Leader-Clerk (MP)
1 EM Messenger-Radioman (R)
1 EM Driver (R)

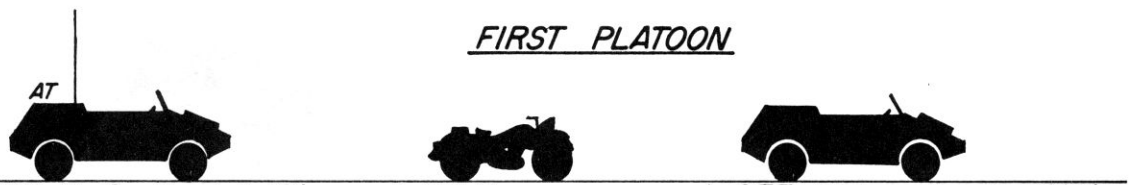


1 NCO Radio Sgt.(R)
1 EM Radioman (R)
1 EM Radioman-Driver (R)

1 EM Messenger (R)

1 EM Messenger (R)

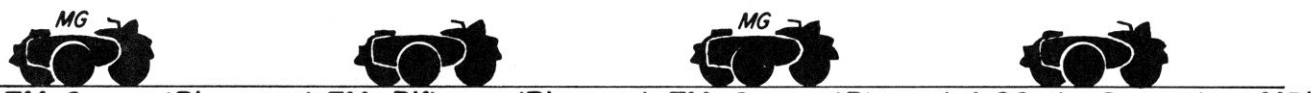
FIRST PLATOON



1 NCO Hq.Section Ldr.(R)
1 EM Messenger-Radioman(R)
1 EM Driver (R)

1 EM Messenger (R)

1 OFF Platoon Leader (MP)
1 EM Medic (P)
1 EM Driver (R)



1 EM Gunner (P)
1 EM Loader (P)
1 EM Driver (R)

1 EM Rifleman (R)
1 EM Rifleman (R)
1 EM Driver (R)

1 EM Gunner (P)
1 EM Loader (P)
1 EM Driver (R)

1 NCO 1st Squad Ldr. (MP)
1 EM Rifleman (R)
1 EM Driver (R)



1 EM Gunner (P)
1 EM Loader (P)
1 EM Driver (R)

1 EM Rifleman (R)
1 EM Rifleman (R)
1 EM Driver (R)

1 EM Gunner (P)
1 EM Loader (P)
1 EM Driver (R)

1 NCO 2nd Squad Ldr. (MP)
1 EM Rifleman (R)
1 EM Driver (R)



1 EM Gunner (P)
1 EM Loader (P)
1 EM Driver (R)

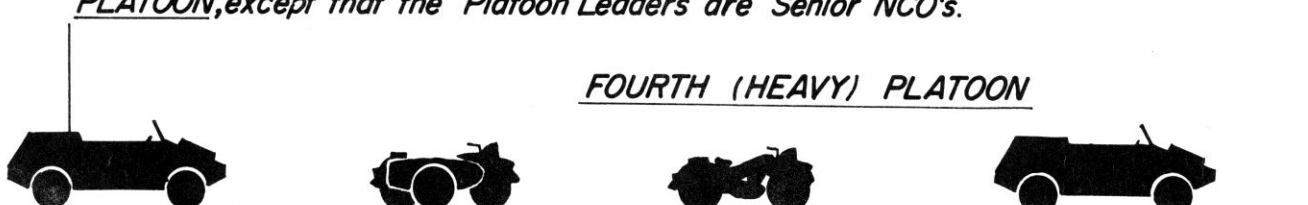
1 EM Rifleman (R)
1 EM Rifleman (R)
1 EM Driver (R)

1 EM Gunner (P)
1 EM Loader (P)
1 EM Driver (R)

1 NCO 3rd Squad Ldr. (MP)
1 EM Rifleman (R)
1 EM Driver (R)

SECOND PLATOON and THIRD PLATOON are identical to the FIRST PLATOON, except that the Platoon Leaders are Senior NCO's.

FOURTH (HEAVY) PLATOON



1 NCO Hq.Section Ldr.(R)
1 EM Messenger-Radioman(R)
1 EM Driver (R)

1 EM Messenger (R)

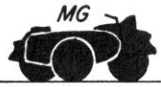
1 EM Messenger (R)

1 OFF Platoon Leader (MP)
1 EM Medic (P)
1 EM Driver (R)

1st Machine Gun Section



1 EM MG Gunner(P)
1 EM MG Gunner(R)
1 EM Driver (R)



1 EM MG Gunner(P)
1 EM MG Gunner(R)
1 EM Driver (R)



1 NCO Squad Ldr.(MP)
1 EM Driver (R)



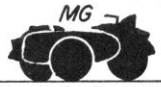
1 NCO Leader - 1st MG Section (P)
1 EM Driver (R)



1 EM Ammo Carrier (R)
1 EM Driver (R)



1 EM MG Gunner (P)
1 EM MG Gunner (R)
1 EM Driver (R)



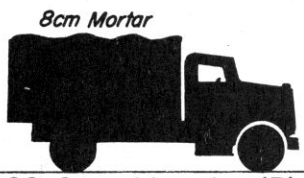
1 EM MG Gunner (P)
1 EM MG Gunner (R)
1 EM Driver (R)



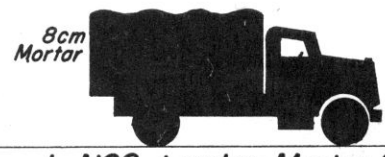
1 NCO Squad Ldr. (MP)
1 EM Driver (R)

2nd Machine Gun Section is identical to 1st Section above.

3rd Mortar Section

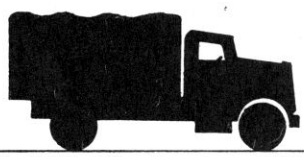


1 NCO Squad Leader (P)
1 EM Mortar Gunner (P)
4 EM Mortar Crew (2R, 2P)
1 EM Weapons Mechanic (P)
1 EM Driver (R)

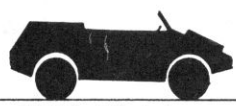


1 NCO Leader-Mortar Section (MP)
1 NCO Squad Leader (P)
1 EM Mortar Gunner (P)
4 EM Mortar Crew (2R, 2P)
1 EM Driver (R)

MAINTENANCE SECTION

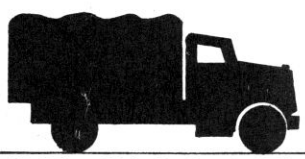


3 EM Mechanics (R)
1 EM Driver (R)

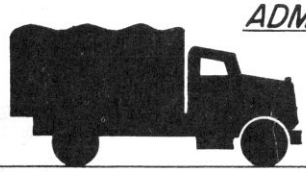


1 NCO Maintenance Sgt. (P)
1 NCO Mechanic Foreman (R)
1 EM Driver (R)

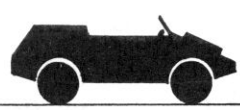
ADMINISTRATION & SUPPLY SECTION



1 NCO Chief Cook (R)
1 EM Cook (R)
1 EM Driver (R)

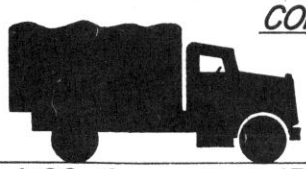


1 NCO Equipment Sgt. (R)
1 EM Clerk (R)
1 EM Weapons Asst. (R)
1 EM Driver (R)



1 NCO First Sgt. (MP)
1 NCO Weapons Sgt. (P)
1 EM Driver (R)

COMPANY TRAINS

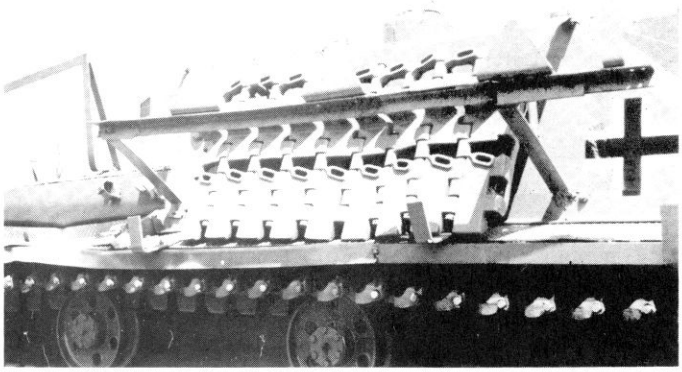


1 NCO Accountant (R)
1 EM Shoemaker (R)
1 EM Tailor (R)
1 EM Driver (R)

AFV INQUIRY

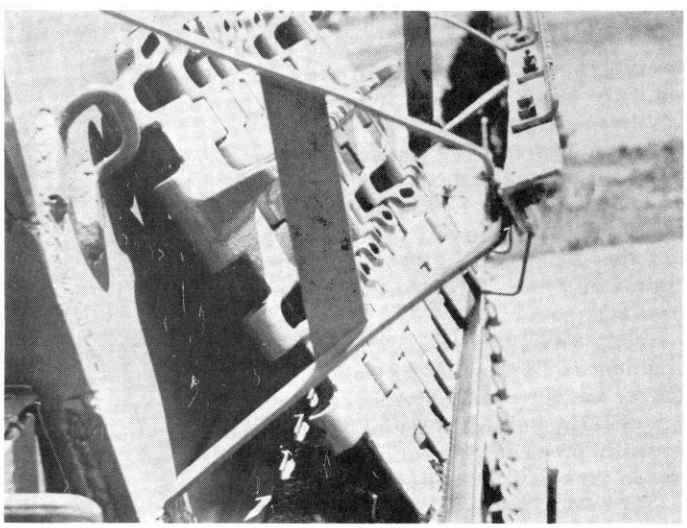
Armor Question from Readers, with Answers from the AFV-G2 Staff.

This month's article is devoted to a subject that we explored in Vol. 4, No. 2; namely, the German Ostkette extended track used on Panzer III and Panzer IV tanks to improve flotation over snow and in mud. In the previous article, we requested more information and better photographs of the two different types of Ostketten. One of our readers, Mr. Geoff Walden of Covington, Kentucky, sent in the three photographs below to illustrate the late-war style of extended track. The photos show a small section of spare track on the side of the Sturmgeschütz III. assault gun on display at Fort Knox. This



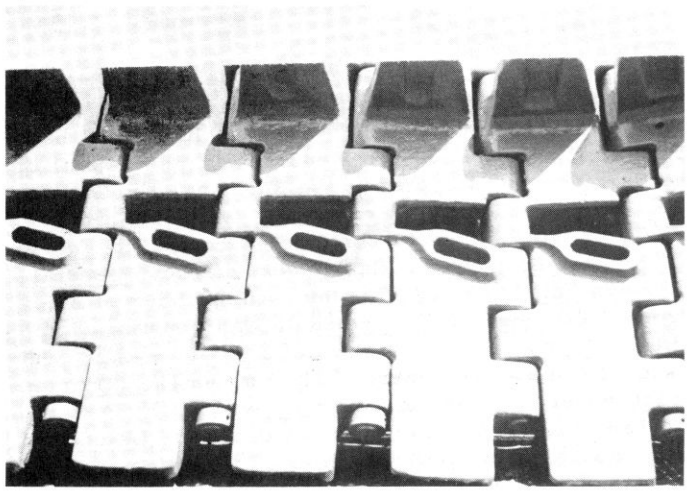
particular vehicle is of the late type, with "Saukopf" curved mantlet and remote-controlled loader's machine gun. While the vehicle's track is of the normal type, the small spare section (of nine shoes) fastened to the right side of the hull is of the Ostkette type that we labeled as "late-war". The photo above shows the location of the track against the side of the hull; the extended portion of the track points downward toward the ground. The photo below shows an angled view of the same track segment.

The photos reveal one detail that escaped us in the previous article; the "late-war" style of Ostkette did not consist of extender-pieces that were "pinned" to the



regular standard-width track, as we diagrammed in the previous article. Instead, late-style Ostkette was a complete track in itself, with the extender-pieces being an extension part of each track shoe. This is clearly shown in the photograph below, which is a close-up of the outboard portion of the Ostkette section of track. Note that the inboard track section is otherwise normal and identical to regular track.

It would appear that useage of this track was similar to the two widths of track used on the Tiger, ie. "transportation" and "combat" track. As used on the Panzer III. and Panzer IV., the normal width track was used during temperate weather. When fall started to turn to winter and snow began to accumulate, the entire track was changed-over to the wider Ostkette track. In all instances, this was probably a good-deal less work than individually installing the extender-pieces of the early type of winter track. The disadvantages of this second track system was that it complicated an already overburdened supply system, by creating a bulky and heavy accessory for every tank in a unit.



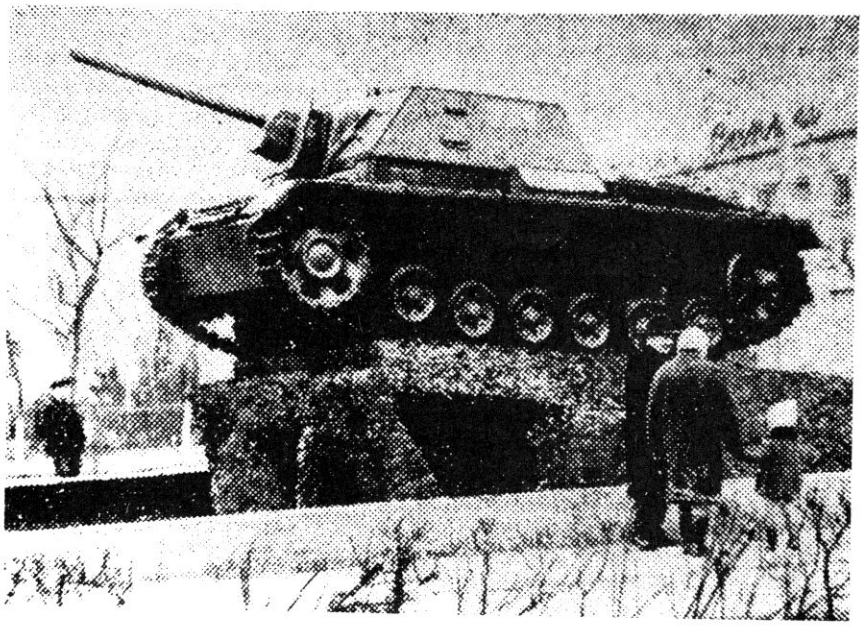
It would appear, though, that this late-style of Ostkette offered considerable strength advantages over the early extender-piece track. An engineer when questioned about the differences in strength admitted that the late-track would be much stronger and that weight loads would be better transmitted through the outside supported tracks. While the late track would still be subject to snagging on brush and rocks, the extra strength would greatly decrease the possibility of thrown or broken tracks in this situation.

We would again ask readers if they can possibly find any good quality photographs to show the details of the early-style, extender-type Ostkette, as used on some Sturmgeschütz III's and Panzer IV's.....

Special thanks go to Mr. Walden for his help in providing the photographs used in this article.

Lost ! And Found !

The Saga of a Soviet SU-76i



by Charles N. Adams

&

James W. Loop

Left: SU-76i Assault Gun on its pedestal in Sarny, Rovno Oblast, Ukraine, USSR, in late 1972 or early 1973. Photo by I. Trebus

During the winter of 1943-44, the Red Army was on the march, pushing the German Army back towards Western Europe. The Dnieper River had been forded and, on 6 November 1943, Kiev, the capital of the Ukraine, was liberated by the Russians. The German LIX. Corps, under General der Infanterie Frederick Schulz was instructed to continue to cover the Fourth Panzer-Armee northern flank, west of Kiev. Generalfeldmarschall Fritz von Manstein, commander of Army Group South (Heeres-Gruppe Süd), was counting on the LIX.Corps, under his former chief of staff, to carry-out his order of early January 1944. But the 1st Ukrainian Front, under command of General Leytenant N. F. Vatutin, had other ideas, for his units drove the LIX. Corps out of Korosten, northwest of Kiev. This action gave the Russian forces access to two main roads, one running due west to Rovno, the other southwest to Shepetovka. In the heavily wooded swampy terrain, on the edge of the Pripyat marshes, roads and railroads were important.

As part of the 1st Ukrainian Front's overall plan, the 77th Rifle Corps was directed to attack northwest of, and as part of, the 13th Army's main thrust towards the important transportation center of Rovno. In the vanguard of the 77th Rifle Corps was the 143rd Rifle Division, under command of Colonel M. M. Zaikin, with the objective being Sarny (in Rovno Oblast of the Ukraine) located between the Sluch' River on the east and the Goryn' River on the west astride the railroad running west from Kiev. Unseasonably high temperatures in the daytime that were well above freezing, had persisted since late December 1943. Rain and snow turned the roads into mud and when the temperature sank, the roads became icy. Onward Colonel Zaikin's 143rd Rifle Division moved, fighting the mud as well as the Germans, and another river had to be crossed.

Slowly, the attacking SU-76i Assault Gun approached the Sluch' River, just east of Sarny. The ice on the river looked strong enough to support the weight of the full-tracked vehicle. Will the ice hold? How about the unseasonably high tenperatures? The SU-76i Assault Gun started across the ice. First a crack, then a crunching sound as the ice gave-way and the Assault Gun broke through the ice and sank to the bottom of the river with its four-man crew trapped inside. The 143rd Rifle Division pushed-on and, only hours later, captured Sarny on 11 January 1944. Moscow officially saluted the troops for the capture of Sarny on 12 January 1944 and awarded the coveted award of "Order of the Red Banner" to the 143rd Rifle Division for its victory. There ended the World War II. history of Sarny for the next 28 years.

In the fall of 1972, the water-level of the Sluch' River fell considerably. The SU-76i Assault Gun that had had its resting place on the muddy bottom for 28 years was rediscovered and moved ashore from its watery grave. The remains of the four unidentified crewmen were given a heroes funeral and buried in the Sarny city cemetary.

The SU-76i Assault Gun was refurbished and placed on a pedestal in the square of "The Prospect", named in honor of I. V. Lenin, in Sarny. It serves as a monument to the Soviet soldiers who liberated the city from the Germans on 11 January 1944. Thus the only known remaining SU-76i Assault Gun has found its final resting place.

The photograph above shows the SU-76i on its monument in Sarny, Rovno Oblast, Ukraine. This is, we believe, the first and only unretouched photograph showing a SU-76i Assault Gun to be published outside of the Soviet Union. The SU-76i was, in essence, a captured German tank of the Pz.Kpfw. III. series that was rework-

ed by the Russians into an Assault Gun, utilizing a 76mm gun, during the 1942-43 time period. This photograph clearly shows that this SU-76i was built by the Russians on a late-model Pz. Kpfw. III., Ausführung H (Type 7/ZW) tank chassis, as evidenced by the drive-sprocket and idler-wheel of the suspension/drive system. The gun appears to be a 76mm without a muzzle-brake, and incorporating a shield that is attached to the recoil system armor in front of the gun mantlet. Somehow, somewhere we hope that additional photos of this, the only known SU-76i remaining from World War II. will be published. Can and readers furnish additional information and photos of this vehicle?

* *

REFERENCES

Primary:

Lt. Colonel of Reserves P. Kokoshkin, "Sobytiya Fakty Khronika - So Dna Reki", Krasnaya Zvezda (Red Star), Moscow, 4 October 1972, pp. 4

I. Trebus, "Ta Samaya Samokhodka", Krasnaya Zvezda (Red Star), Moscow, 25 January 1973, pp. 4

Lt. General M. A. Kozlov, Editor, V Plameni Srazheniy (In the Flames of Battle), Military Publishing House, USSR Ministry of Defense, Moscow, 1973, pp. 166-201. (This is the battle history of the Soviet 13th Army in World War II.)

Secondary:

Armin L. Sohns, "Identification of Models F, G, H and J of the Pz. Kpfw. III. (Sd. Kfz. 141)", AFV News, July 1970, Vol. 5, No. 4), pp. 4-5

W. J. Spielberger and F. Wiener, Die deutschen Panzerkampfwagen III und IV mit Ihren Abarten, 1935-1945, J. V. Lehmanns Verlag, München 1968.

John Milson, Russian Tanks, 1900-1970, Arms & Armour Press, London, 1970), pp. 132

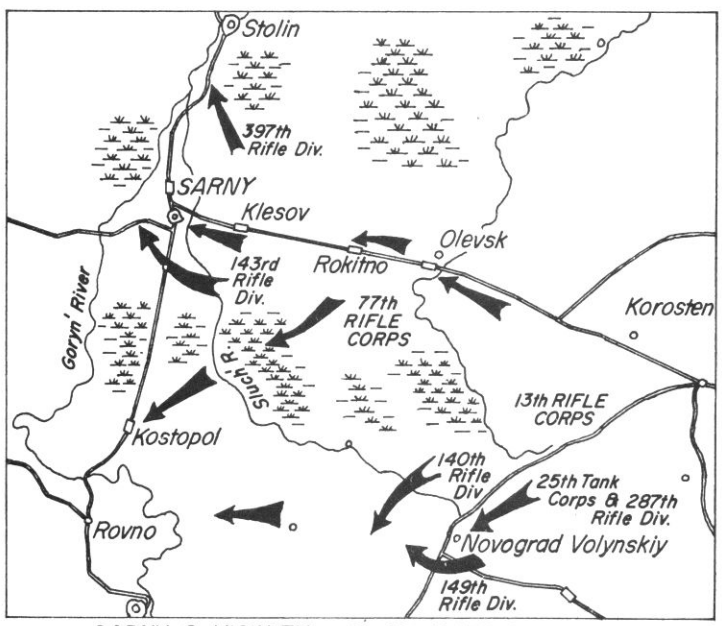
Alexander Werth, Russia at War: 1941-1945, Avon Books, New York, 1970, pp. 702-705.

Earl F. Ziemke, Stalingrad to Berlin: The German Defeat in the East, U.S. Army Historical Series, Government Printing Office, Washington 1968, pp. 218-247.

Paul Carell, Scorched Earth: The Russian-German War, 1943-1944, Ballentine Books, New York, 1971, pp. 702-705

WHITE RUSSIA - UKRAINE - EASTERN POLAND





SARNY & VICINITY - 10-12 JANUARY 1944

Editor's Notes on the SU-76i: On the 25th of October 1943, Panzer-Armee-Oberkommando 1. (1st Panzer Army) sent a report to the OKW Abwehr (Intelligence) section dealing with data on the Russian Army; this report dealt with the first sighting of the SU-76i. The report included the following information:

"In the 177th Tank Regiment of the 64th Mechanized Brigade, there are four companies of tanks; each company has eleven vehicles. These tanks are designated "Sturmgeschütz 76mm". They are based on the chassis of the German Panzer III. with a Maybach engine and new superstructure with frontal armor of 3 to 4cm in thickness, and side armor of 1 to 1.5cm in thickness. The top of the superstructure is open. Traverse of the gun is 15 degrees to each side and elevation is 7 degrees plus and minus. The total height of the vehicle is 180cm."

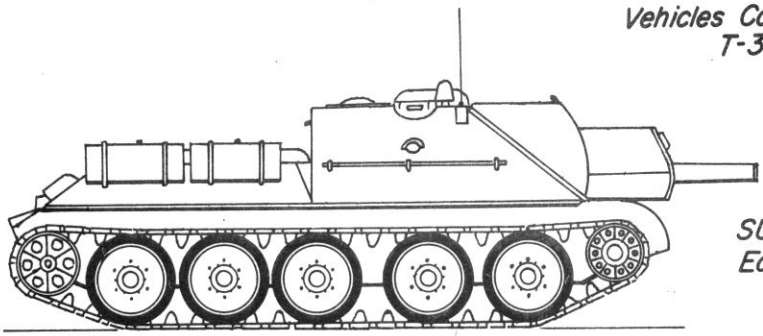
This report was further disseminated in late November by OKW Abwehr Abteilung Fremde-Heere-Ost (IId) as their document Nr. 6271/43 with the further information that the Soviet 64th Mechanized Brigade was a part of the VII. Mechanized Corps.

The INTERNATIONAL SCALE MODEL SHOW: The second annual International Scale Model Show (ISMS) will be held on August 4th and 5th, 1973 at the Las Vegas (Nevada) Convention Center. Last year's show brought forth over 200 extremely fine models (in the model contest) and this year's show promises to be even better and larger. In addition to the regular agenda, the show will feature modeling and information seminars held throughout both days of the show, exhibiting films, slides and "How-to" information on a wide variety of topics including armor. AFV-G2 will again have a display booth and our representatives will be available to answer questions and provide information on armor topics. For more information on the show, contact the International Scale Model Show at 3841 Syracuse Drive, Las Vegas, Nevada 89121, or telephone (702) 451-6194. See 'ya in Vegas.....

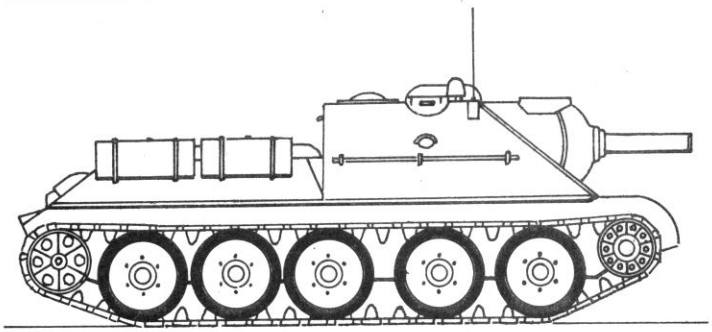
SOVIET SELF-PROPELLED GUNS

Vehicles Constructed on the T-34 Tank Chassis

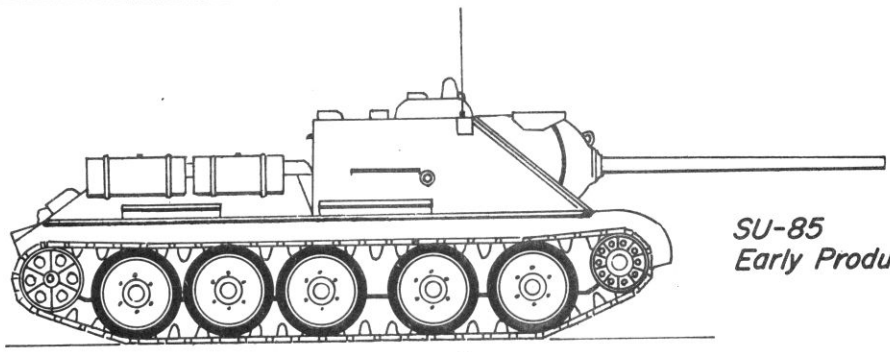
by W.Larson & J.Steuard



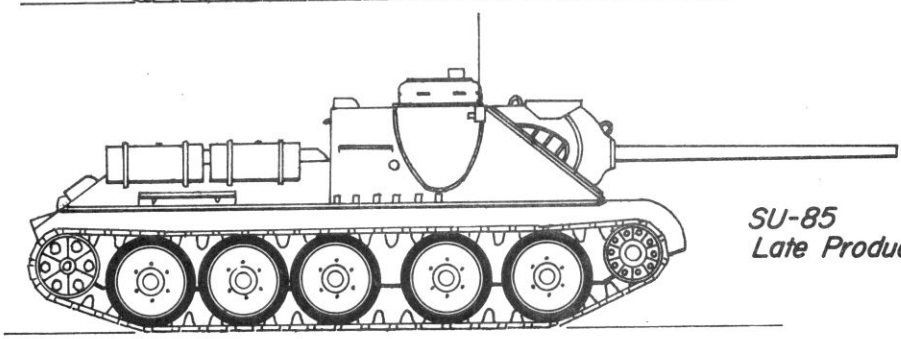
SU-122
Early Production Series



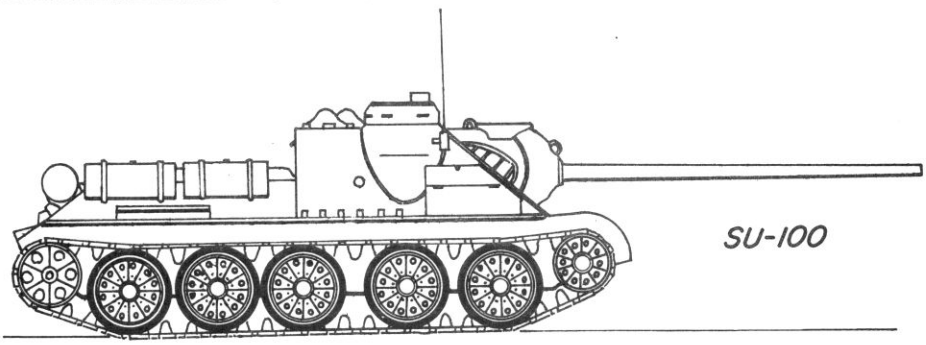
SU-122
Late Production Series



SU-85
Early Production Series



SU-85
Late Production Series



SU-100

Source: Typy Broni i Uzbrojenia, Nr. 8

Historian's Notebook

by William Platz

Time to the Historian is his stock in trade; but when his subject is a military operation, it can prove a troublesome bit of merchandise. The complexity of modern warfare is rather similar to a large rope, composed of thousands of individual strands woven together. Each strand - or skirmish - contributes to the strength of the lien or the outcome of the battle. The problem for the researcher is the tracing of these various interrelated series of actions through the days, weeks and sometimes months necessary to cover a major operation. A bewildering number of events widely separated in both time and location provide ample opportunities for confusion; while this situation is further complicated by the fact that the best sources - personal narratives and small unit histories - cover only a single thread. Keeping events in their proper sequence and perspective is a major difficulty for the author and the reader alike.....

One method of keeping matters straight through all this is to construct a "Time Frame". This is a relatively simple project involving a few sheets of paper and a minimum amount of time. Nevertheless, it can provide a valuable, and permanent, research tool. Actually, a Time Frame can be as simple or complex as you wish, depending on what particular information you are trying to follow. The simplest example is a single linear arrangement as shown in Chart No. 1 below. This is ideal for covering the development of one subject or following the action of a single unit; and, for want of a better name, is referred to as a "Time Line".

Tank Strength of the Tobruk Garrison

Date	Additions	Losses
6 Apr. 41	18- Mk.VI. Light 26- Cruisers (A.13-?) } Workshops	
7 Apr. 41	5- A.9 Cruisers 6- Cruisers (?) 15- Mk.VI. Lights } 1st RTR Arrived from Alex. by sea - 4- Matildas 4th RTR	
8 Apr. 41	2- Cruisers - 2d.Armd.Division HQ Arrived from Timini	
9 Apr. 41	4- Cruisers, 18- Mk.VI. Lights released from Workshops to composite unit 3d.H/5th RTR	
10 Apr. 41		
11 Apr. 41		2- A.9's of B Sqdn.1st RTR burned-out, 1-OR-KIA, 2-OR-WIA.
12 Apr. 41		
13 Apr. 41		
14 Apr. 41		2- Cruisers, C Sqdn.1st RTR burned. 1- Cruiser, C Sqdn.1st RTR engine hit
15 Apr. 41		
16 Apr. 41		
17 Apr. 41		
18 Apr. 41		
19 Apr. 41	8- Matildas - D Sqdn., 7th RTR landed by sea from Alex. 3d.Armd. Bde. reorganized. 4-Matildas of 4th RTR turned over to 7th RTR. ca. 15- Cruisers serviceable....	
20 Apr. 41		
21 Apr. 41		
22 Apr. 41		1- Mk.VI., B Sqdn.3d.H, hit by AT fire outside perimeter and lost 1- Mk.VI., B Sqdn.3d.H, damaged by AT fire, but recovered.

- Continued on Page 32 -



NEW - AT WALTHERS

JR IMRIE/RISLEY 1/24th Scale All Metal

Available Aug 1973
These figures go well with 1/24 scale model planes

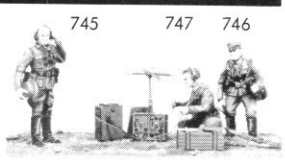


K302 German WWII AF Fighter Pilot 9.95
K303 British RAF Fighter Pilot, WWII 9.95

Complete Line of I/R Figures, Books, Paints & Painting Guides are available from Walthers

YOUR DEALER CAN GET IT FROM WALTHERS

Cavalier Miniatures Ltd
54mm
All Metal
WWII



745 (G45) German Officer w/earphone 3.50
746 (G46) German Sgt. in soft cap 3.50
747 (G47) German Radio & Operator 5.00

Complete Line of Cavalier Figures listed and illustrated in Walthers Military Catalog.

YOUR DEALER CAN GET IT FROM WALTHERS

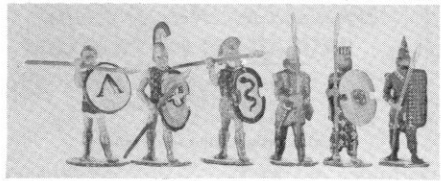
MRC/ HUMBROL
AUTHENTIC COLORS MODELING PAINT
1/2 oz. Tinlets 45¢ ea
Over 120 Colors!

MICRO SCALE
AIRCRAFT & ARMOR DECALS in 1/32 and 1/72 SCALES
Silk Screened Multi-colored

Complete listing in Military Catalog and Military Supplement

YOUR DEALER CAN GET IT FROM WALTHERS

Der Kriegspielers THERMOPOLITES
30mm-All Metal 4/2.95
FOR ANCIENT WARGAMES AND DIORAMAS



300 Spartan Hoplite
301 Theban Hoplite
302 Thespian Hoplite
325 Persian Immortals
326 Median Immortals
328 Chorasmian

Complete Line of Der Kriegspielers Figures, Games & Accessories available from Walthers

YOUR DEALER CAN GET IT FROM WALTHERS

*Walther '73 Military Miniatures Catalog-- NOW includes 12 page supplement of New lines and Latest releases--- 100 pages of figures, armor, artillery, paints, tools, books, diorama supplies, etc.
ONLY $2.00

VALIANT
THE OLD GUARD, INC.
TAMIYA
ARMTEC
GHQ
Squadron/Rubin Miniatures

WM. K. WALTHERS INC. DEPT AFV
4050 NORTH 34TH STREET MILWAUKEE, WIS. 53216
Use this handy coupon or make a copy/facsimile

☐ '73 Military Miniatures Catalog & 12 page Supplement/Update only $2.00
☐ I already have the '73 Catalog just send me the supplement .25 (for postage and handling)

Name _____
Address _____
City _____ State ____ Zip ____

ROMMEL: The Campaign For North Africa



the NEW game on the epic WWII campaign with fast BATTLE GAMES: *Rommel's Romp *Gazala Grind *O'Connor's Gallop *Crusader Rides Again Historical Arrival and Departure/Division-level Step-reduction/ Unique Supply/Perforated Unit Counters/Aerial Attack HEAVY PAPER MAPBOARD $5 plus 50¢ postage to: Loren Sperry 1014 N.4th SHEBOYGAN, Wi 53081

CATERING EXCLUSIVELY TO THE HOBBYIST, ARTIST AND HANDCRAFTER

Alexandria Arts & Crafts

5725 DUKE STREET
LANDMARK CENTER
ALEXANDRIA, VIRGINIA 22304

ARTHUR C. SLATER 703 354-9898

8mm Movies & Color Slides

• ARMOR • AIRCRAFT
• WEAPONS • ARTILLERY
• SOLDIERS • UNIFORMS

• American Civil War
• World War I.
• World War II.
• Korean War

For complete lists, send SASE to:

Col. G. B. Jarrett
Box 173 R.D.1
Aberdeen, MD. 21001

Tactical Markings of the Waffen-SS, Part 3 (Continued from page 11)

was adopted for the corps headquarters, but the tactical symbol used by the "Nordland" division (which will be illustrated later) was a modification of the "Wiking Sonnenrad". An illustration in Volume 3 of the Bender-Taylor Waffen-SS series does show a mid-war variation on the standard "Wiking" marking which deserves mention. On the vehicle, the white "Sonnenrad" appears on a black circular background, perhaps to provide better contrast for the white symbol. This marking variation is illustrated above, and the original illustration can be dated sometime in the summer of 1943. As with most of the Waffen-SS divisions, late-war photographic evidence of tactical markings of the 5. SS-Panzer-Division "Wiking" is most difficult to find.

Next issue..... coverage of two more Waffen-SS divisions.....

Comparison of Armored-Infantry Support Vehicles (Continued from Page 17).

mounting was unique. While other nations had vehicles in operation which approached the Czech 38(t) in mobility, none of these vehicles mounted an equivilent weapon. The 15cm gun, while short-ranged and stubby in length, fired an extremely powerful high-explosive shell, which could very effectively deal with infantry-type targets. While the gun had a very limited anti-tank capability, it should be appreciated that the Germans did not design the vehicle for this type of job. The low-velocity and high-trajectory fire provided by the big gun was its best asset, as it could deal with reverse slope mortar positions that would not be handled by higher-velocity (and flater trajectory) weapons (such as the Soviet 76mm gun, or the U.S. 75mm M1897 gun). By having these guns directly assigned to the Panzer-Grenadier-Regimenter, direct support of infantry operations could be rapidly accomplished, in a far more efficient manner than by "attached" units which might be unfamiliar with the unit. On the debit side, it should be appreciated that the German "Bison" lacked sufficient armor-protection, it was open-topped and exposed the crew to enemy over-head shell bursts, and it was a make-shift conversion on an obsolete chassis, instead of having been originally-designed for its mission.

The Baron's Bookshelf (Continued from Page 18).

Unfortunately, areas in the text are equally vague and/or shed incorrect information. While the author obviously has a good deal of knowledge about Wehrmacht small-unit tactical markings, there are whole areas of the subject that the author either does not have primary source material, or has not taken sufficient time to fully research.

For the above reasons, this is a book that the reviewer cannot consciously recommend to those readers looking for an accurate and detailed study of German Wehrmacht tactical markings. The book is expensive for what you're getting, and there's just too many serious errors or omissions.

The Historian's Notebook (Continued from Page 31).

The construction of the Time Line presents little difficulty; however it is wise to allow an ample amount of space for each section so that additional material from other sources can be added later. Indeed, the only real problem is deciding what the time interval for each section should be. In the above example, a daily record is most appropriate since the strength reports and similar documents were issued on a daily basis. In other circumstances, hourly, weekly or monthly listings may be more helpful.

Of course, such a simple device has its limitations. An attempt to cover a campaign, or even a single battle, with a Time Line may well result in a document resembling the "Great American Novel". One solution to this is to combine a series of individual Time Lines into a parallel framework. Each Time Line becomes a separate column within the Frame and a single date column ties each event to the whole. The subject headings should be selected to provide a wide spectrum of viewpoints, or to follow a series of separate but related events. They can be personalities, geographical locations, specific units or such general topics as neighboring Theaters of Operations. The more separate lines that are covered, the greater the value of the Frame; however, each additional column increases the effort required to maintain it. A delicate balance must be reached and this requires both judgement and practice; however, a good rule-of-thumb is that each of the columns should have approximately the same amount of entries.

Letters to the Editor

To the Editor:

I am a relatively new subscriber to your excellent magazine, and I particularily enjoy the "Color 'n Camouflage" features. Could you please tell me which vehicles have been covered in past issues of AFV-G2, and which of these back issues are available. Thank you.

D. Jamison
Long Beach, Calif.

The above letter is typical of many that we receive each month requesting information on past "Color 'n Camouflage" subjects and paint samples. Our first Color and Camouflage article appeared in Volume I, Number 12, and since that time, each issue of the "G2" has contained at least one complete set of vehicle markings. The following is a listing of those articles and the accompanying paint samples.

ISSUE	SUBJECT	COLOR CHIP
I/12	British Churchill V. (NWE)	British Dark Green
II/1	German Panzer IV. H (Italy)	German Sand Tan Primer
II/2	British Crusader I. (NA)	British Desert Yellow
II/3	German Tiger I. (NA)	German Insignia Red
II/4	U.S. M-8 Armd Car (Italy)	U.S. Olive Drab (weathered)
II/5	German Kfz. 1/20 (EF)	German Dark Green
II/6	USSR T-34/76D (EF)	USSR Olive Brown
II/7	German Panzer IV. D (Fr.)	German Panzer-Gray
II/8	British Saladin AC (1967)	British Bronze Green
II/9	USSR T-55 (1968)	USSR Modern Green
II/10	U.S. M-7 "Priest" (NWE)	U.S. Olive Drab
II/11	British Mk. VIb (NA)	British Med. Light Blue
II/12	German Panzer III. E (NA)	German Sahara-Gelb
III/1	British M-4A3 Sherman (Italy)	British Light Earth
III/2	German Sd. Kfz. 250/9 (EF)	German Off-White
III/3	German Panzer Valentine (NA)	German Sand Tan Primer
III/4	U.S. M-4A3E8 (Korea)	U.S. Olive Drab
III/5	Italian M-13/40 (NA)	Italian Sand Yellow
III/6	West German M48A2 (1970)	Bundeswehr Green-Gray
III/7	British A. 10 Cruiser (Gr.)	British Light Earth
III/8	U.S. "Jeep" (1941)	U.S. Insignia Light Blue
III/9	German Sd. Kfz. 232 (EF)	German Panzer-Gray
III/10	U.S. M-60A1 (1972)	U.S. Dark Olive Drab
III/11	British Centurion III. (Korea)	British Bronze Green
III/12	German StuG. III. G (EF)	German Sand Tan Primer
IV/1	British M4A1 Sherman (NWE)	British Trainer Yellow
IV/2	German Jagdpanzer 38(t) (1945)	German Dark Brown
IV/3	German Panzer IV. H (Italy)	German Sand Tan Primer
IV/4	U.S. M-60A1 (Korea 1972)	U.S. Chrome-Yellow

Regarding which of the above issues are still available, we will not provide such a listing in this answer as the stock varies considerably, and such a listing should more properly be obtained on an individual basis from the Circulation Department. We should indicate that a gradual reprinting of the Volume II issues is being undertaken, with the eventual goal of maintaining a stock of all issues. At the present, Vol. II, No's 1, 2, 3, and 4 have been reprinted, although only No. 4 is still available in quantity. No. 5 is in the printing process and should be available in two or three weeks, while No. 1 through No. 3 are again in the reprinting process.

NEW PRODUCTS * * * * NEW PRODUCTS * * * *

Hasegawa's latest in the 1:72nd scale armor series that they're pioneering are models of the German Tiger I, Tiger II and Panther tanks of World War II. While this is not a full review, the models are nicely detailed and the price is moderate. Resulting models will work well in dioramas..... The latest in publications from Profile Publications Ltd. are No. 56 "Missile Armed Armoured Vehicles" by R. M. Ogorkiewicz, No. 57 "Sd. Kfz. 250 and 251" by Walter Spielberger and P. Chamberlain, and No. 58 "French Infantry Tanks: Part I. (Chars 2C, D and B)" by Major James Bingham. All are excellent references..... A new line of metal miniature vehicles available in the U.S. is the "Renown" series, manufactured by the Pheonix Model Developments Ltd., The Square, Earls Barton, Northampton, are: MV/1 Bedford 15cwt MWD Lorry and MV/2 Daimler "Dingo" Scout Car. Detail seems excellent with no flash and they fill a gap in the Airfix line.....

TOY CRAFT
HOBBY SHOP
MILITARY HOBBY SPECIALIST
AIRCRAFT - ARMOR - SHIPS
BOOKS - DECALS - FIGURES
HO & N GAUGE RAILROAD
RADIO CONTROL ACCESSORIES
ESTES ROCKETS
3904 GRANBY STREET NORFOLK, VA. 23504
ALBERT E. PLANT PHONE (703) 622-6043

U. S. Museum Service
U. S. Military items, complete stock of WW-II equipment and uniforms.
List $1.00
U.S. Museum Service
Old Concord Road
Concordville, Pa. 19331
GL-9-4690 GL-9-5594

(201) 431-9230
ARMOUR - MINIATURES
ITEMS FOR THE HOBBYIST AND COLLECTOR - ARMOUR, AIRCRAFT MINIATURES, WAR GAMES, MILITARIA, ACCESSORIES, PUBLICATIONS, MINITANKS
G. N. KENNY
DUTCH LANE, BOX 45 MARLBORO, N.J.

Everything in Hobbies TEL: 597-1805
MILITARY IN MINIATURE
671A Morris Park Avenue
Bronx, New York 10462
HOURS: 12 Noon to 6 PM. Daily, Mon. and Thur. until 9 PM.

HOURS
MON.-FRI. 12:00 NOON - 9:00 P.M.
SATURDAY - 9:00 A.M. - 6:00 P.M.
SUNDAY - 1:00 P.M. - 4:00 P.M.
CLOSED
SUNDAYS DURING JUNE, JULY AND AUGUST. ALSO LEGAL HOLIDAYS.
Stanton
Hobby Shop Inc.
4734 North Milwaukee Avenue Chicago, Illinois 60630
Telephone 283-6446

CHANGING ADDRESS ?

To avoid problems with your subscription (late arrival or no arrival at all), please send a change-of-address notice to Baron Publishing Company. Remember, we need your address before we can send you AFV-G2

MODELER'S DIRECTORY

If you contact or buy from our Advertisers, why not tell them that you saw their ad in AFV-G2.

(713) 667-5210

Aircraft, Armor, Ships, Books, Magazines, etc. Military Miniatures & Trains

MALL HOBBIES
UNIQUE

"MAIL ORDER"

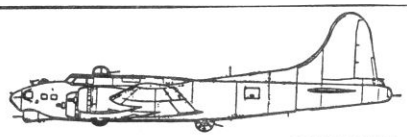
DAILY 10 to 9
SATURDAY 10 to 5

4652 BEECHNUT
HOUSTON, TEXAS 77035

A FULL LINE SHOP FOR THE ADULT MODELER

STRETE HOBBIES
MILITARIA - HO RAILROADS - BOOKS

3655 SULLIVANT AVE.
COLUMBUS, OHIO 43228
(614) 279-6959



MILITARY HOBBIES
138 EAST TAFT AVE.
ORANGE, CALIFORNIA 92667

SCALE MODELS
* AIRCRAFT
* SHIPS
* ARMOR

AL OKAZAKI
(714) 637-1211

The Armoury
727 W. JOHNSON STREET
RALEIGH, N. C.

MILITARY HOBBY SPECIALIST
AIRCRAFT · ARMOR · SHIPS
FIGURES · BOOKS · DECALS

HOURS 7-10 P. M. TUES.-THURS.-SAT.

MAIL - 2807 WAYLAND DR., RALEIGH, N. C. 27608
HOME PHONE (919) 787-9373

TELEPHONE 235-7321



The Meriden Modeler
CORNER EAST MAIN STREET & PADDOCK AVENUE
MERIDEN, CONNECTICUT 06450

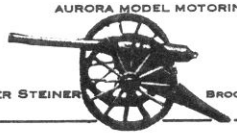
ARMOR
SHIPS

BOOKS

AIRCRAFT
MILITARY GAMES

PHONE (212) 833-6111

Walt's Hobby Shop
MODELS TRAINS CRAFTS
AURORA MODEL MOTORING



WALTER STEINER

8321 FIFTH AVE.
BROOKLYN, N. Y. 11209



AIR & ARMOUR HOBBIES
606 "F" STREET
BELMAR, NEW JERSEY 07719

681-1990

MILITARY MINIATURES
U.S., U.K. & FRANCE

BOOKS - PRINTS
NEW & RARE

WEAPONS - UNIFORMS - BADGES
A. B. Charles & Son Hobby Shop
GHQ MICROARMOUR – MINITANKS
ALL PLASTIC KITS

3213 W. LIBERTY AVE.
PITTSBURGH, PA. 15216
561-3068

17112 Detroit Ave.
Phone 221-5383

Wings Hobby Shop Inc.
Cleveland, Ohio 44107

Ron & Al Cicerchi

- MODEL AIRCRAFT
- RAILROADS N-HO-O
- MODEL ROCKETS
- R. C. EQUIPMENT
- SHIPS - BOATS
- CRAFT SUPPLIES
- BALSAWOOD
- PARTS - ACCESSORIES

TOM METZLER HOBBY CENTER INC.
"THE MODEL MAN"

STORE HOURS:
DAILY 10-6
MON., FRI. 10-8

357-1617
6113-15 E. WASHINGTON ST.
INDIANAPOLIS, INDIANA
46219

"EVERYTHING IN TRAINS"



The Hobby Chest, Inc.
8808 Bronx Avenue · Skokie, Illinois · 675-4811

Louis L. Quigley

MILITARY FIGURES FOR THE COLLECTOR

CLASSIFIED ADVERTISING

This section is open to anyone who is seeking or disposing of products useful or of interest to the readers of AFV-G2. Please furnish a street address for our private records when using a P. O. Box number in your ads. Rates: All payments must accompany ad copy. Subscribers: 20 words for $1.00; each additional word is 4¢. Non-subscriber rates are 10¢ per word. AFV-G2 reserves the right to refuse advertising which, in the opinion of our editorial staff members, is not in good taste, or which offers products not suitable for the "military" or "armor" hobby. Public service or Club announcements will be made at no cost in this column, provided space is available, on a first-come, first-served basis.

FOR SALE: Slides & Movies (Super 8 & Regular 8mm); World War I & II, Korea, U.S. Civil War; Free Lists (Stamp Appreciated)... Jarrett, RD#1, Box 173, Aberdeen, Maryland 21001

WANTED: Information on Korean War Period U.S. Army armor units, or Divisional/Regimental histories of units involved in the Korean conflict. Will either buy (paying highest price) or would appreciate loan of material (will be returned, insured, in three days). Would also be interested in swapping information and/or photos on the Korean conflict. Dave Warner, P. O. Box 1635, Garden Grove, CA 92646

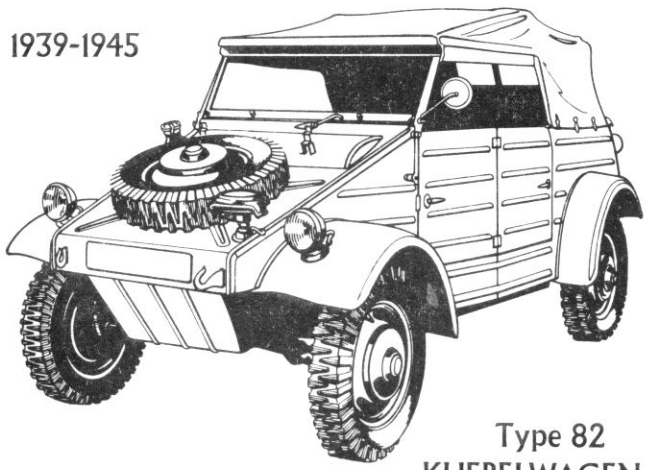
WANTED: Photos, Information, Personal experiences related to American WWII halftracks, AT/AA guns, armored cars, light and medium tanks, SP's, amphibious and recovery vehicles; back issues of 'Tankette' plus binders (similar to AFV-G2 design) for AFV News, Tankette, Bellona Prints; an WW II vehicle for sale or abandoned. Please state condition, terms, locations, prices for above items.. William Auerbach, 490 Chelsea Road, Oceanside, NY 11572

FOR SALE: Cheap! Large collection of GHQ Microarmour. All types. Mostly unpainted. Send stamped, self-addressed envelope for price list. Larry Albert, P.O. Box 195, Bedford, Mass. 01730

FOR SALE: ITC kits of the Russian PT-76 Amphibious tank; BTR-50(P) personnel carrier (on PT-76 chassis); Frog 2 rocket (on PT-76 chassis). Approximately 1/32nd scale. $10.00 each, list alternate choices! WANTED: ITC kits of the Battleship Oregon and Sub-chaser. Stephen Auslender, P. O. Box 2133, Glenbrook, Conn. 06906

VOLKSWAGEN
for the Wehrmacht

1939-1945



Type 82
KUEBELWAGEN

BRAND NEW ! A CLASSIC COLLECTOR'S ITEM !

Detailed Examination of a "German Jeep" Captured by the U.S. War Department

160 pages / profusely illustrated / 6" x 9" / $6 postpaid
send to Post-era Books, Box 150, Arcadia, CA 91006.

DISCOUNT CATALOG



for wargamers and modelers
$1.00ppd.

Soldiers, tanks, equipment in 9mm to 75mm scale. Board-games, rules booklets, books, etc., ALL at discount prices in this 70 page catalog.

LOWRYS, Box C - afg, Belfast, Me. 04915

Are you an AFV MODELER ?

DO YOU CONVERT OR SCRATCHBUILD AFV MODELS ? IF SO, WHY NOT CONTACT AFV-G2; WE ARE LOOKING FOR ARTICLES ON MODELING PROJECTS. IF INTERESTED, CONTACT THE EDITOR FOR DETAILS.

NOW IS THE TIME TO SUBSCRIBE TO

the Squadron

- FULL COLOR PAGES
- ARMOR
- AIRCRAFT
- FIGURES
- DRAWINGS
- COLOR SCHEMES
- CONVERSIONS
- COMPLETE SQUADRON SHOP CATALOG

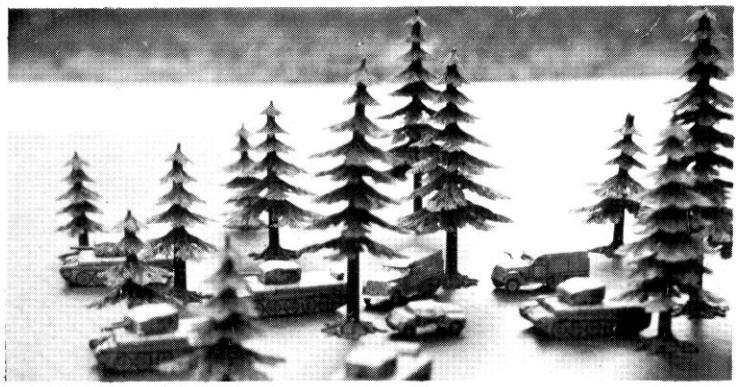
NOW WITH FULL COLOR PAGES!



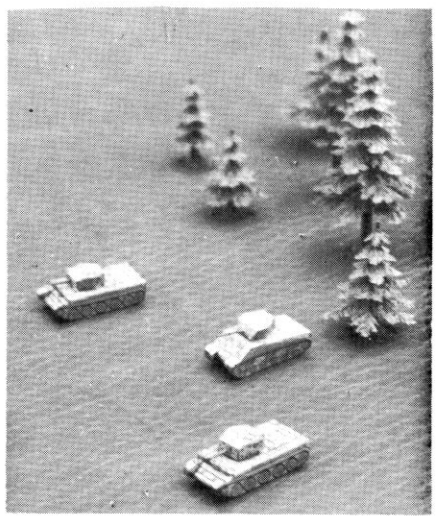
SUBSCRIPTION RATES

1 Year – 4 Issues – $3.50
2 Years – 8 Issues – $6.00

THE SQUADRON SHOP
23500 JOHN R
HAZEL PARK, MICHIGAN 48030



1/150 th Scale AFV's



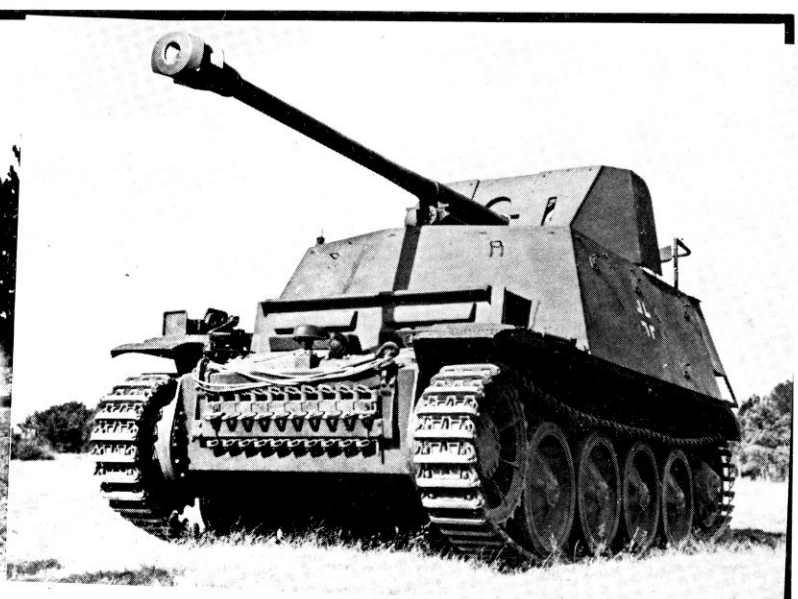
.....For use with N gauge accessories. Our range has now been widened by CHALLENGER, CROMWELL AA, ARV, and Dozer Conversions, 75mm SHERMAN M4, M4A2, M4A3, SCOUT CAR M3A1, NASHORN, HUMMEL, BISON, MARDER III. In all, well over 50 different AFV's are now available in our card kits, covering many widely used Allied and German World War II. vehicles.

Use our quantity packs to build model formations - send for Introductory Packs for full details : Selection Pack - $2.00 Airmail ($1.00 Sea), or Full Range Pack- $7.00 Airmail ($3.00 Seamail)

Greening, Knoll Cottage, Knoll Road, Dorking, Surrey, England



A.



B.

NEW! Tank Posters NEW!

Yes it's **TANKS** to you from *Recon.* First of a new series of posters on the armored vehicles of the world, each poster measures approx. 18 x 25 inches, printed in quality black & white on coated gloss paper. Poster A, the German *Jadgpanther*, Poster B, the *Jadgpanzer Marder II*. Price: **$1.50** each, plus .25¢ per order postage.

Also available from Recon, *Selbstfahrlafette Lorraine SdKfz 135/1* (the British Middle East Report on the 150cm selfpropelled howitzer) @ **$1.50**, and *TD a brief history of the 899th Tank Destroyer Battalion*, @ **$1.00.**

Order any of the above from: **RECON Publishing, P.O. Box 8688, San Jose, CA. 95155.** California residents please add 5% tax.

recon